

#### WALGREEN COMPANY

104 Wilmot Road MS#1630 Deerfield, Illinois 60015

## ANNUAL GROUNDWATER SAMPLING, SITE MANAGEMENT PLAN REVIEW, AND INSTITUTIONAL CONTROL AND ENGINEERING CONTROL (IC/EC) CERTIFICATION

#### WALGREEN COMPANY STORE 02077 10 EAST CHESTER STREET KINGSTON, NEW YORK

BCP Site No. C356032

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**Prepared By:** 



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#### 1.0 INTRODUCTION

On behalf of the Walgreen Company (Walgreens), URS Corporation-New York (URS) is pleased to present this report summarizing the results of the annual groundwater sampling event and review of compliance with the existing *Site Management Plan (SMP)* for Walgreens Store 02077 at 10 East Chester Street in Kingston, New York. In addition, URS is attaching the Institutional Control and Engineering Control (IC/EC) Certification.

#### 2.0 SITE HISTORY

The subject property (site) is located at 10 East Chester Street in Kingston, New York (see Figure 1). The site consists of approximately 1.0 acre of land and is currently Walgreens Store No. 02077. The construction of the store was completed in 2010. The site is commercially zoned with surrounding properties that include a mix of commercial businesses and residential lots.

According to available information, portions of the site have historically been occupied by a dry cleaning facility, a vehicle fueling/service station, and a trolley barn that became a school bus maintenance garage. Based on the results of the *Brownfield Cleanup Program Remedial Investigation Report/Remedial Action Plan* prepared by S&W Redevelopment of North America, LLC, dated August 2005, the constituents of potential concern at the site include volatile organic compounds (VOCs) associated with solvents (i.e., trichloroethene and tetrachloroethene) and petroleum products. The previous owner of the site, 10 East Chester Street LLC, entered into the New York State Brownfield Program (BCP Site Number C356032) and completed remediation in accordance with the requirements of the BCP.

The site remedial activities included the removal of seven underground storage tanks (USTs) that contained petroleum products, the excavation of impacted soil, and performing in-situ chemical oxidation using potassium permanganate to remediate the groundwater. The remedial activities were conducted in accordance with the New York State Department of Environmental Conservation (NYSDEC) approved Remedial Action Plan prepared by S&W Redevelopment of North America, LLC, dated August 2005 and the Remedial Design In-Situ Chemical Oxidation prepared by Sterns and Wheeler, LLC, dated October 2005.

S&W Redevelopment of North America, LLC submitted a *Final Engineering Report* to the NYSDEC in November 2006. A Certificate of Completion was issued by the NYSDEC on December 14, 2006. This certificate stated "...that the remediation requirements set forth in ECL Article 27, Title 14, have been or will be achieved in accordance with the time frames, if any established in the remedial work plan." The certificate also noted that the site is restricted to a "commercial" use and that the site remediation is also predicated on the use of institutional or engineering controls. The use of groundwater underlying the site is prohibited without prior approval from the NYSDEC.

A Site Management Plan (SMP) was prepared by S&W Redevelopment of North America, LLC, on behalf of 10 East Chester Street LLC in December 2006. The SMP requires that all buildings constructed on site have a NYSDEC and New York State Department of Health (NYSDOH) approved active sub-slab depressurization system, maintenance of six-inches of concrete or asphalt pavement across the site, and annual groundwater monitoring. Any future excavation of soils at the site must be done in accordance with the SMP. The SMP also requires an annual certification that the engineering and institutional controls employed at the site are unchanged from the previous certification and that nothing has occurred that would impair the ability of such controls to protect the public health and environment.



During redevelopment activities in May and June 2008, monitoring wells MW-1S, MW-2S, and MW-3S were abandoned with approval from the NYSDEC. Replacement monitoring wells MW-1, MW-2 and MW-3 were installed by Bureau Veritas in February 2010. The locations of these wells are shown in Figure 2. Groundwater samples were collected in March and May 2010. The monitoring well installation and groundwater sampling results for 2010 are summarized in the *Annual Groundwater Sampling Report* prepared by Bureau Veritas, dated September 29, 2010.

URS submitted Annual Groundwater Sampling, Site Management Plan Review, and Institutional Control and Engineering Control (IC/EC) Certifications to the NYSDEC in April 2011 and April 2012. URS collected a supplemental round of groundwater samples in August 2012 to verify recent data and to gather additional data to evaluate groundwater geochemistry. The recommendation was to continue annual groundwater sampling events using a low turbidity sampling methodology. The NYSDEC approved of this approach in January 2013. URS submitted an Annual Groundwater Sampling, Site Management Plan Review, and Institutional IC/EC Certification to the NYSDEC in December 2013. The NYSDEC did not approve the Periodic Review Report (PRR) dated December 2013 and IC/EC Certification and requested that a Corrective Measures Workplan (CMWP) be submitted to address recalcitrant levels of tetrachloroethene in MW-3.

URS conducted a review of previous investigative work conducted at the site and identified data gaps. URS submitted a *Workplan to Delineate Soil and Groundwater Impacts* to the NYSDEC in May 2014. The *Workplan* proposed that additional investigative work be conducted to delineate shallow soil impacts above the water table along the former sewer line that connected the floor drains within the former dry cleaning facility to the sanitary sewer located in Broadway, in the area of the former 550-gallon waste oil UST, and along the western property boundary (along East Chester Street) to verify that there is not an off-site source of tetrachloroethene. The NYSDEC approved the *Workplan* on September 10, 2014. The investigation activities were conducted in October 2014 and the results will be submitted to the NYSDEC under separate cover. URS conducted the annual groundwater sampling event for 2014 and review of compliance with the existing *SMP* in conjunction with the investigation activities. The following report only summarizes the annual groundwater sampling event and review of compliance with the existing *SMP*.

#### 3.0 ANNUAL GROUNDWATER SAMPLING

A project-specific *Health and Safety Plan (HASP)* was prepared prior to the commencement of the groundwater sampling activities at the site. The HASP was prepared in accordance with all applicable state and federal requirements. All personnel that conducted work at the site met the appropriate training requirements as identified in 29CFR 1910.120. The fieldwork was performed under Level D personal protective equipment.

#### 3.1 SAMPLE COLLECTION

URS collected groundwater samples from the three existing monitoring wells (MW-1, MW-2, and MW-3) on October 13, 2014. Prior to collecting the groundwater samples, the depth to water and the bottom of the well were measured and recorded.

Each monitoring well was purged prior to the collection of groundwater samples in accordance with *Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Ground Water Samples from Monitoring Wells, Revision 3* (United States Environmental Protection Agency Region 1 [USEPA], 1996). Low flow purging was performed using a Geopump 2TM low flow peristaltic pump and dedicated



silicone (rotor head) and polyethylene (down well) tubing for each well. The polyethylene tubing intake was set at the midpoint of the saturated portion of the well screen in each monitoring well. Depth to water measurements were collected, and flow rates adjusted, until the water level drawdown stabilized. URS monitored temperature, pH, specific conductivity, dissolved oxygen (DO), turbidity, and oxidation-reduction potential (ORP) during purging using a Horiba multi-parameter meter. Water quality measurements were taken at five-minute intervals throughout purging. The purge data is provided in Table 1.

Purging continued until the variation of each parameter listed above was within designated ranges (USEPA, 1996) over three consecutive readings, at which point the tubing was removed from the flow-through cell and the sample bottles were filled. The groundwater samples were containerized in laboratory-supplied pre-preserved bottles. The groundwater samples were immediately chilled on ice and shipped to TestAmerica Laboratories (TestAmerica) of Buffalo, New York following proper chain-of-custody (COC) procedures. Each groundwater sample was analyzed for VOCs by USEPA Method 8260. URS collected one field duplicate from MW-3 for the analysis of VOCs. In addition, one trip blank was submitted for analysis.

The groundwater removed during purging was containerized in a 55-gallon steel drum, labeled, and staged on site. The waste is scheduled to be removed in December 2014.

#### 3.2 GROUNDWATER ANALYTICAL RESULTS

The groundwater analytical results are presented in Table 2. The laboratory analytical report is provided in Appendix A. The groundwater sample analytical results were compared to the *NYSDEC Groundwater* (GW) Standards published in Technical and Operational Guidance Series (TOGS) 1.1.1. Seven VOCs (benzene, ethylbenzene, isopropylbenzene, toluene, xylenes 1,2-dichloroethane, and tetrachloroethene) were detected above their respective NYSDEC GW standard in at least one of the groundwater samples. The data is discussed below. Available historical data for these compounds is provided in Table 3.

#### Petroleum Compounds

Five petroleum compounds (benzene, ethylbenzene, isopropylbenzene, toluene, and xylenes) were detected above their respective NYSDEC GW standard in at least one of the groundwater samples.

Benzene was detected in the groundwater sample collected from MW-1 at a concentration of 1.5  $\mu$ g/L. The NYSDEC GW standard for benzene is 1.0  $\mu$ g/L. Benzene was not detected in the groundwater sample collected from MW-2 or in the groundwater sample collected from MW-3.

Ethylbenzene was detected in the groundwater sample collected from MW-1 at a concentration of 18  $\mu$ g/L. The NYSDEC GW standard for ethylbenzene is 5.0  $\mu$ g/L. Ethylbenzene was detected at a concentration of 4.1  $\mu$ g/L (below the NYSDEC GW standard) in the groundwater sample collected from MW-2 and was not detected in the groundwater sample collected from MW-3.

Isopropylbenzene was detected in the groundwater sample collected from MW-2 at a concentration of 16  $\mu$ g/L. The NYSDEC GW standard for isopropylbenzene is 5.0  $\mu$ g/L. Isopropylbenzene was detected at a concentration of 2.6  $\mu$ g/L (below the NYSDEC GW standard) in the groundwater sample collected from MW-1 and was not detected in the groundwater sample collected from MW-3.



Toluene was detected in the groundwater sample collected from MW-1 at a concentration of 13  $\mu$ g/L. The NYSDEC GW standard for benzene is 5.0  $\mu$ g/L. Toluene was not detected in the groundwater samples collected from MW-2 and MW-3.

Xylenes were detected in the groundwater sample collected from MW-1 at a concentration of 62  $\mu$ g/L and in the groundwater sample collected from MW-2 at a concentration of 5.6  $\mu$ g/L. The NYSDEC GW standard for total xylene is 5.0  $\mu$ g/L. Xylenes were not detected in the groundwater sample collected from MW-3.

#### Historical Petroleum Compound Concentration Trends

The concentrations of benzene, ethylbenzene, toluene, and xylenes in the groundwater samples collected from MW-1 have generally decreased since May 2010. However, the concentrations of these compounds increased in the groundwater sample collected from MW-1 in October 2014. The concentrations of isopropylbenzene in the groundwater samples collected from MW-1 have continued to decrease since May 2010.

The concentrations of isopropylbenzene and xylene in the groundwater samples collected from MW-2 have generally decreased since March 2010. The concentrations of benzene and ethylbenzene in the groundwater samples collected from MW-2 have remained relatively stable since March 2010. Benzene was not detected in the groundwater sample collected from MW-2 in October 2014. Toluene has not been detected in the groundwater samples collected from MW-2 since March 2010.

Benzene, ethylbenzene, isopropylbenzene, toluene, and xylenes have not been detected in the groundwater samples collected from MW-3 since March 2010.

#### Chlorinated Volatile Organic Compounds

Two chlorinated VOCs (1,2-dichloroethane and tetrachloroethene) were detected above their respective NYSDEC GW standard in at least one of the groundwater samples.

1,2-dichloroethane was detected in the groundwater sample collected from MW-1 at a concentration of 0.65  $\mu$ g/L. The NYSDEC GW standard for 1,2-dichloroethane is 0.6  $\mu$ g/L. 1,2-dichloroethane was detected at a concentration of 0.29  $\mu$ g/L (below the NYSDEC GW standard) in the groundwater sample collected from MW-2. 1,2-dichloroethane was not detected in the groundwater sample collected from MW-3.

Tetrachloroethene was detected in the groundwater sample collected from MW-3 at a concentration of 1,200  $\mu$ g/L (Duplicate sample was 1,100  $\mu$ g/L). MW-3 is located downgradient of the former dry cleaning facility at the site. The NYSDEC GW standard for tetrachloroethene is 5.0  $\mu$ g/L. Tetrachloroethene was not detected in the groundwater samples collected from MW-1 or MW-2. Tetrachloroethene has not been detected in the groundwater samples collected from MW-1 since May 2010 and from MW-2 since August 2012.

#### Historical Chlorinated VOC Concentration Trends

The concentrations of 1,2-dichloroethane in the groundwater samples collected from MW-1 have generally decreased since March 2010, with a slight increase in concentration in 2013 and 2014. The



concentration of cis-1,2-dichloroethene in the groundwater sample collected from MW-1 increased in October 2014. Tetrachloroethene and trichloroethene have not been detected in the groundwater samples collected from MW-1 since March 2010.

The concentrations of tetrachloroethene and trichloroethene in the groundwater samples collected from MW-2 have generally decreased since May 2010. The concentrations of cis-1,2-dichloroethene in the groundwater samples collected from MW-2 have remained relatively stable since March 2010. The concentration of 1,2-dichloroethane in the groundwater sample collected from MW-2 increased in October 2014.

The concentrations of trichloroethene in the groundwater samples collected from MW-3 have generally decreased since 2012. The concentrations of cis-1,2-dichloroethene and tetrachloroethene in the groundwater samples collected from MW-3 have remained relatively stable since March 2010. 1,2-dichloroethane has not been detected in the groundwater samples collected from MW-3 since March 2010.

## 4.0 ANNUAL SITE MANAGEMENT PLAN REVIEW AND INSTITUTIONAL CONTROL AND ENGINEERING CONTROL CERTIFICATION

The *SMP* requires an annual certification that the engineering and institutional controls employed at the site are unchanged from the previous certification and that nothing has occurred that would impair the ability of such control to protect the public health and environment. The *Institutional Control/Engineering Control (IC/EC) Certification* is provided in Appendix B.

The following institutional controls have been identified for the site: groundwater use restriction, land-use restriction, site management plan, and soil management plan. The site is a commercial property and is an operating Walgreens store. The site does not use groundwater for any purpose. There is an approved *SMP* for the site. There have been no soil excavations at the site since the property has been redeveloped as a Walgreens store. The institutional controls employed at the site are unchanged from the previous certification in 2013.

The following engineering controls have been identified for the site: cover system and vapor mitigation system. A barrier layer of six-inches of concrete is maintained at the site. There have been no soil excavations at the site since the property has been redeveloped as a Walgreens store. The Walgreens store has an operating sub-slab depressurization system. This system was inspected during the October 2014 sampling event and appears to be operating properly. The engineering controls employed at the site are unchanged from the previous certification in 2013.

The *IC/EC Certification Form* requests that assumptions made in the preparation of the Qualitative Exposure Assessment be validated. URS reviewed available historical documentation and the Qualitative Human Health Exposure Assessment that was included as Section 7 of the *Remedial Investigation Report/Remedial Action Plan* dated August 2005. The assessment was conducted prior to the redevelopment of the site as a Walgreens store. URS has included an updated Qualitative Exposure Assessment as Appendix C.

The *SMP* requires annual groundwater sampling and evaluation of groundwater trends. The *SMP* indicates that additional remedial action may be required by the NYSEC if concentrations of the target compounds are increasing or do not show a decreasing trend. The concentrations of tetrachloroethene at



MW-3 have remained stable since March 2010 and are two to three orders of magnitude higher than the NYSDEC GW standard. URS conducted investigation activities at the site in October 2014 to delineate soil and groundwater impacts. The results will be submitted to the NYSDEC under a separate cover.

#### 5.0 RECOMMENDATIONS

As indicated in the *IC/EC Certification*, the engineering and institutional controls employed at the site are unchanged from the previous certification in 2013. The sub-slab depressurization system will remain in operation and a six-inch concrete barrier layer will remain across the site.

URS conducted additional investigative work at the site in October 2104 to delineate shallow soil impacts above the water table along the former sewer line that connected the floor drains within the former dry cleaning facility to the sanitary sewer located in Broadway, in the area of the former 550-gallon waste oil UST, and along the western property boundary (along East Chester Street) to verify that there is not an off-site source of tetrachloroethene. The results of the investigation will be submitted to the NYSDEC under a separate cover. Once the results are submitted, Walgreens and the NYSDEC can discuss future plans for the site.

#### **TABLES**

#### TABLE 1 SUMMARY OF PURGE DATA

#### WALGREEN COMPANY STORE 02077 10 EAST CHESTER STREET KINGSTON , NEW YORK

Well Number	Volume Purged (Gallons)	DTW (ft bgs)	рН	Specific Conductivity (mS/cm)	Temperature (°C)	DO (mg/L)	Turbidity (NTU)	Oxidation Reduction Potential (mV)	Notes
	0.00	9.66	-	-	-	-	-	-	
	0.08	10.00	6.61	0.685	18.24	0.00	31	-55	
	0.29	10.23	6.50	0.598	18.49	0.97	23.6	-8	Total Depth = 14.58 ft bgs
MW-1	0.55	10.56	6.49	0.641	18.60	0.00	8.8	-25	
MI W - I	0.98	10.83	6.57	0.682	18.64	0.00	5.4	-58	
	1.21	10.98	6.63	0.707	18.49	0.00	6.3	-77	
	1.37	11.08	6.67	0.720	18.41	0.00	7.8	-84	
	1.53	11.21	6.67	0.725	18.40	0.00	11.7	-86	
	0.00	9.63	-	-	-	-	-	-	
	0.04	9.72	7.09	0.617	15.84	0.00	7.6	-77	
	0.21	9.78	6.50	0.596	17.21	0.00	7.2	-126	Total Depth= 14.11 ft bgs
	0.50	9.79	6.54	0.388	17.78	0.00	6.4	-132	
MW-2	0.84	9.79	6.60	0.346	18.02	0.00	1.8	-136	
	1.11	9.79	6.62	0.334	18.24	0.00	0.0	-139	
	1.37	9.79	6.62	0.331	18.32	0.00	0.0	-142	
	1.64	9.79	6.63	0.336	18.39	0.00	0.0	-145	
	1.90	9.79	6.63	0.342	18.47	0.00	0.0	-148	
	0.00	9.58	-	-	-	-	-	-	
	0.25	9.68	7.15	0.951	15.45	0.00	16.6	103	
	0.50	9.68	6.86	0.963	16.47	0.00	13.1	115	Total Depth = 17.03 ft bgs
MW 2	0.75	9.68	6.81	0.960	16.59	0.00	9.6	123	
MW-3	1.05	9.68	6.78	0.940	16.79	0.00	7.2	130	
	1.32	9.69	6.79	0.929	16.94	0.00	4.6	133	
	1.45	9.69	6.79	0.928	17.14	0.00	2.5	135	
	1.72	9.68	6.80	0.928	17.18	0.00	0.1	137	

Notes:
Monitoring wells were purged on October 13, 2014.
ft bgs: feet below ground surface

mS/cm: millisiemens per centimeter mg/L: milligrams per liter

NTU: Nephelometric Turbidity Units mV: millivolts

ppm: parts per million DTW: Depth to water DO: Dissolved Oxygen

\*: Probe malfunctioned

N/A: Not Available, meter had an error

## TABLE 2 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

#### WALGREEN COMPANY STORE 02077 10 EAST CHESTER STREET KINGSTON, NEW YORK

		NYS GW	T	1	1	MW-4
		Standard*	MW-1	MW-2	MW-3	(Duplicate of MW-3)
COMPOUND (µg/L)	CAS#	(μg/L)	10/13/2014	10/13/2014	10/13/2014	10/13/2014
Volatile Organic Compounds - EPA 8260 C	CIIS II	(Fg/2)	10/10/2011	10/10/2011	10/10/2011	10/10/2011
1.1.1-Trichloroethane	71-55-6	5.0	ND (0.82)	ND (0.82)	ND (16)	ND (16)
1,1,2,2-Tetrachloroethane	79-34-5	5.0	ND (0.21)	ND (0.21)	ND (4.2)	ND (4.2)
1.1.2-Trichloroethane	79-00-5	1.0	ND (0.23)	ND (0.23)	ND (4.6)	ND (4.6)
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1.0	ND (0.31)	ND (0.31)	ND (6.2)	ND (6.2)
1,1-Dichloroethane	75-34-3	5.0	ND (0.38)	ND (0.38)	ND (7.6)	ND (7.6)
1,1-Dichloroethene	75-35-4	5.0	ND (0.29)	ND (0.29)	ND (5.8)	ND (5.8)
1.2.4-Trichlorobenzene	120-82-1	5.0	ND (0.41)	ND (0.41)	ND (8.2)	ND (8.2)
1,2-Dibromo-3-Chloropropane	96-12-8	0.04	ND (0.39)	ND (0.39)	ND (7.8)	ND (7.8)
1,2-Dibromoethane	106-93-4	0.0006	ND (0.73)	ND (0.73)	ND (15)	ND (15)
1.2-Dichlorobenzene	95-50-1	3.0	ND (0.79)	ND (0.79)	ND (16)	ND (16)
1,2-Dichloroethane	107-06-2	0.6	0.65 J	0.29 J	ND (4.2)	ND (4.2)
1,2-Dichloropropane	78-87-5	1.0	ND (0.72)	ND (0.72)	ND (14)	ND (14)
1.3-Dichlorobenzene	541-73-1	3.0	ND (0.78)	ND (0.78)	ND (16)	ND (16)
1,4-Dichlorobenzene	106-46-7	3.0	ND (0.84)	ND (0.84)	ND (17)	ND (17)
2-Hexanone	591-78-6	[50]	ND (1.2)	ND (1.2)	ND (25)	ND (25)
2-Butanone (MEK)	78-93-3	[50]	ND (1.3)	ND (1.3)	ND (26)	ND (26)
4-Methyl-2-pentanone (MIBK)	108-10-1	NS	ND (2.1)	ND (2.1)	ND (42)	ND (42)
Acetone	67-64-1	[50]	ND (3.0)	ND (3.0)	ND (60)	ND (60)
Benzene	71-43-2	1.0	1.5	ND (0.41)	ND (8.2)	ND (8.2)
Bromodichloromethane	75-27-4	[50]	ND (0.39)	ND (0.39)	ND (7.8)	ND (7.8)
Bromoform	75-25-2	[50]	ND (0.26)	ND (0.26)	ND (5.2)	ND (5.2)
Bromomethane	74-83-9	5.0	ND (0.69)	ND (0.69)	ND (14)	ND (14)
Carbon disulfide	75-15-0	[60]	ND (0.19)	ND (0.19)	ND (3.8)	ND (3.8)
Carbon tetrachloride	56-23-5	5.0	ND (0.27)	ND (0.27)	ND (5.4)	ND (5.4)
Chlorobenzene	108-90-7	5.0	ND (0.75)	ND (0.75)	ND (15)	ND (15)
Dibromochloromethane	124-48-1	[50]	ND (0.32)	ND† (0.32)	ND† (6.4)	ND (6.4)
Chloroethane	75-00-3	5.0	ND (0.32)	ND (0.32)	ND (6.4)	ND (6.4)
Chloroform	67-66-3	7.0	ND (0.34)	ND (0.34)	ND (6.8)	ND (6.8)
Chloromethane	74-87-3	5.0	ND (0.35)	ND (0.35)	ND (7.0)	ND (7.0)
cis-1,2-Dichloroethene	156-59-2	5.0	2.9	4.2	ND (16)	ND (16)
cis-1,3-Dichloropropene	10061-01-5	0.4	ND (0.36)	ND (0.36)	ND (7.2)	ND (7.2)
Cyclohexane	110-82-7	NS	1.3	56	ND (3.6)	ND (3.6)
Dichlorodifluoromethane	75-71-8	5.0	ND† (0.68)	ND (0.68)	ND (14)	ND† (14)
Ethylbenzene	100-41-4	5.0	18	4.1	ND (15)	ND (15)
Isopropylbenzene	98-82-8	5.0	2.6	16	ND (16)	ND (16)
Methyl acetate	79-20-9	NS	ND (0.50)	ND (0.50)	ND (10)	ND (10)
Methyl tert-butyl ether	1634-04-4	[10]	ND (0.16)	ND (0.16)	ND (3.2)	ND (3.2)
Methylcyclohexane	108-87-2	NS	1.2	52	ND (3.2)	ND (3.2)
Methylene Chloride	75-09-2	5.0	ND (0.44)	ND (0.44)	ND (8.8)	ND (8.8)
Styrene	100-42-5	5.0	ND (0.73)	ND (0.73)	ND (15)	ND (15)
Tetrachloroethene	127-18-4	5.0	ND (0.36)	ND (0.36)	1,200	1,100
Toluene	108-88-3	5.0	13	ND (0.51)	ND (10)	ND (10)
trans-1,2-Dichloroethene	156-60-5	5.0	ND (0.90)	ND (0.90)	ND (18)	ND (18)
trans-1,3-Dichloropropene	10061-02-6	0.4	ND (0.37)	ND (0.37)	ND (7.4)	ND (7.4)
Trichloroethene	79-01-6	5.0	ND (0.46)	ND (0.46)	ND (9.2)	ND (9.2)
Trichlorofluoromethane	75-69-4	5.0	ND (0.88)	ND (0.88)	ND (18)	ND (18)
Vinyl chloride	75-01-4	2.0	ND (0.90)	ND (0.90)	ND (18)	ND (18)
Xylenes, Total	1330-20-7	5.0	62	5.6	ND (13)	ND (13)

#### Notes

Groundwater samples analyzed by TestAmerica Laboratories in Buffalo, NY.

ND ( ): The compound was not detected at the indicated concentration. Method Detection Limit (MDL) is shown.

Bold values indicate concentrations detected above the reporting limit.

Bold and shaded values indicate concentrations above the comparison standard.

μg/L: micrograms per liter

\*: New York State Department of Environmental Conservation (NYSDEC) Groundwater (GW) Standard Technical and Operational Guidance Series (TOGS) 1.1.1, 2004.

[]: Indicates a Guidance Value.

J: Indicates an estimated value that is less than the quantitation limit but greater than the method detection limit.

†: The laboratory control sample was recovered outside of the control limits.

## TABLE 3 HISTORICAL GROUNDWATER ANALYTICAL RESULTS

#### WALGREEN COMPANY STORE 02077 10 EAST CHESTER STREET KINGSTON, NEW YORK

						Vola	tile Organic Cor	npound Concentra	ation (μg/L)*			
Well	Sample Date Depth to Water (feet bgs)		Benzene	Ethylbenzene Isopropylbenzen		Toluene Total Xylenes		1,2- Dichloroethane	cis-1,2- Dichloroethene	Tetrachloroethene	Trichloroethene	Sample Turbidity (NTU)
	3/13/2010 <sup>A</sup>	NA	ND	ND	ND	ND	53.5	3.6	0.79	ND	ND	4.9**
	5/4/2010 <sup>A</sup>	NA	1.7	130	20	1.7	126.4	3.0	ND	ND	ND	374**
	3/9/2011 <sup>B</sup>	8.14	0.59	43	8.4	0.64	18.4	ND	ND	ND	ND	206
MW-1	2/16/2012 <sup>B</sup>	9.74	0.23	10.5	12.2	ND	ND	ND	ND	ND	ND	>800
	8/8/2012 <sup>C</sup>	9.26	ND	9.0	13	ND	2.8	ND	ND	ND	ND	8
	11/8/13 <sup>C</sup>	9.77	ND	1.1	4.7	ND	ND	0.48	ND	ND	ND	4.56
	10/13/14 <sup>C</sup>	9.66	1.5	18	2.6	13	62	0.65	2.9	ND	ND	11.7
	3/13/2010 <sup>A</sup>	NA	ND	0.97	86	ND	63.5	ND	3.5	5.3	16	2.93**
	5/4/2010 <sup>A</sup>	NA	ND	1.1	45	ND	29.5	ND	2.8	10	17	10**
	3/9/2011 <sup>B</sup>	8.18	ND	4	19	ND	11.6	ND	6.4	0.6	14	800
MW-2	2/16/2012 <sup>B</sup>	9.64	0.28	10.3	27.6	ND	38.5	ND	3.6	0.34	1.0	>800
	8/8/2012 <sup>C</sup>	9.17	ND	1.9	6.1	ND	5.5	ND	3.1	ND	0.47	1.1
	11/8/13 <sup>C</sup>	9.63	0.43	5.3	16	ND	11	ND	5.2	ND	ND	0.46
	10/13/14 <sup>C</sup>	9.63	ND	4.1	16	ND	5.6	0.29	4.2	ND	ND	0.0
	3/13/2010 <sup>A</sup>	NA	ND	ND	ND	ND	ND	ND	1	1,000	7.7	7.41**
	5/4/2010 <sup>A</sup>	NA	ND	ND	ND	ND	ND	ND	ND	2,200	5	10**
	3/9/2011 <sup>B</sup>	8.37	ND	ND	ND	ND	ND	ND	1.5	840	11	>800
MW-3	2/16/2012 <sup>B</sup>	9.56	ND	ND	ND	ND	ND	ND	2.6	1,040	11.2	>800
	8/8/2012 <sup>C</sup>	9.11	ND	ND	ND	ND	ND	ND	ND	200	9.5	1.0
	11/8/13 <sup>C</sup>	9.50	ND	ND	ND	ND	ND	ND	3.0	2,000	7.0	0.3
	10/13/14 <sup>C</sup>	9.58	ND	ND	ND	ND	ND	ND	ND	1,200	ND	0.1

#### Notes:

ND = Not Detected

NA: Not Available

A: At least three well volumes purged with a submersible pump, sample collected with a bailer.

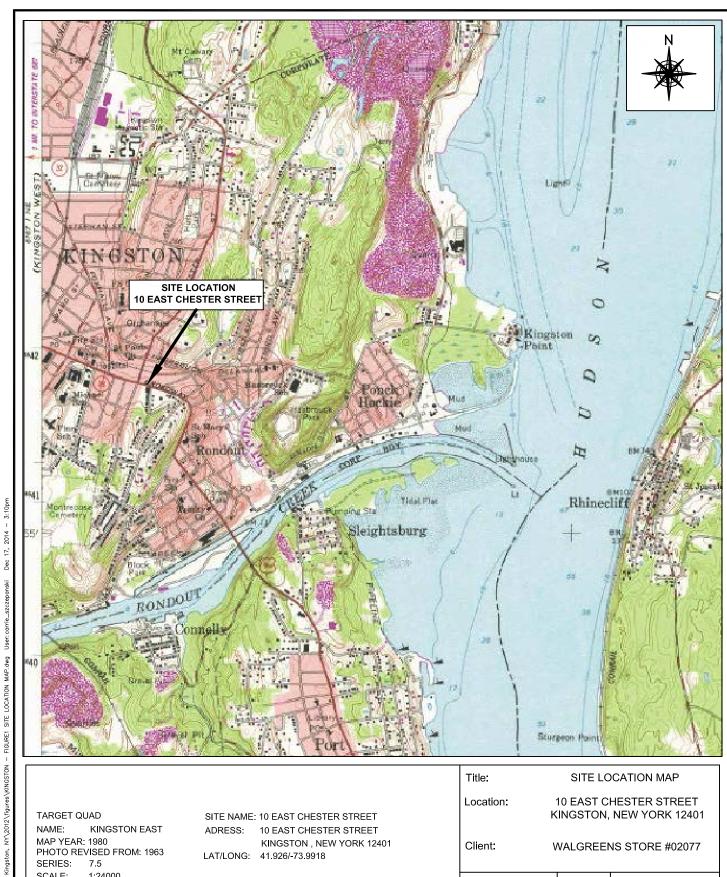
B: Three well volumes purged with a bailer and sample collected with a bailer.

C: Low-flow purging and sampling.

<sup>\*</sup>The maximum of the reported values (i.e., normal sample, duplicates, and dilutions) is listed.

<sup>\*\*</sup>Turbidity value recorded during submersible pump purging; the sample was subsequently collected with a bailer.

#### **FIGURES**



TARGET QUAD

NAME: KINGSTON EAST

MAP YEAR: 1980 PHOTO REVISED FROM: 1963

SERIES: 7.5

SCALE: 1:24000 SITE NAME: 10 EAST CHESTER STREET

10 EAST CHESTER STREET

KINGSTON, NEW YORK 12401

LAT/LONG: 41.926/-73.9918

Title: SITE LOCATION MAP

10 EAST CHESTER STREET Location:

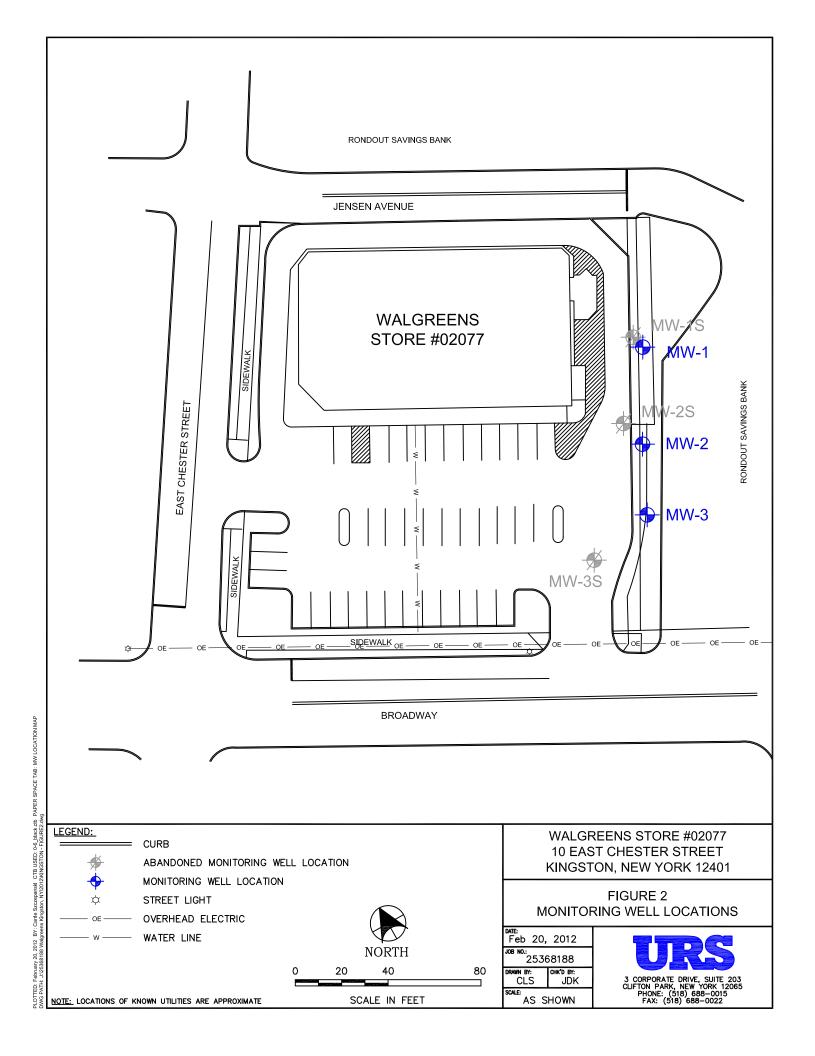
KINGSTON, NEW YORK 12401

Client: WALGREENS STORE #02077



Orafter:	Date:
CLS	December 201
Org. Size:	Job No.:
8.5 x 11	25368188

FIGURE 1



# APPENDIX A LABORATORY ANALYTICAL REPORT



THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-69165-1

Client Project/Site: Walgreens Site (Kingston, NY)

For:

URS Corporation 3 Corporate Drive, Suite 203 Clifton Park, New York 12065

Attn: Ms. Jennifer Gillies

Melisso Deyo

Authorized for release by: 10/22/2014 2:19:56 PM

Melissa Deyo, Project Manager I (716)504-9874

melissa.deyo@testamericainc.com

·····LINKS ······

Review your project results through

Total Access

**Have a Question?** 



**Visit us at:**www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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#### **Definitions/Glossary**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

TestAmerica Job ID: 480-69165-1

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
F1	MS and/or MSD Recovery exceeds the control limits

#### **Glossary**

TEF

TEQ

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points

TestAmerica Buffalo

#### **Case Narrative**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

Job ID: 480-69165-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-69165-1

#### Receipt

The samples were received on 10/14/2014 12:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0° C.

#### GC/MS VOA

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-3 (480-69165-3), MW-4 (480-69165-4), (480-69165-4 MS) and (480-69165-4 MSD). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) for batch 208917 recovered outside control limits for the following analytes: Dichlorodifluoromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260C: The laboratory control sample (LCS) for batch 209000 recovered outside control limits for the following analyte: Chlorodibromomethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

4

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O

10

4.0

13

14

Client: URS Corporation

Client Sample ID: MW-1

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

Lab Sample ID: 480-69165-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethane	0.65	J	1.0	0.21	ug/L	1	_	8260C	Total/NA
Benzene	1.5		1.0	0.41	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	2.9		1.0	0.81	ug/L	1		8260C	Total/NA
Cyclohexane	1.3		1.0	0.18	ug/L	1		8260C	Total/NA
Ethylbenzene	18		1.0	0.74	ug/L	1		8260C	Total/NA
Isopropylbenzene	2.6		1.0	0.79	ug/L	1		8260C	Total/NA
Methylcyclohexane	1.2		1.0	0.16	ug/L	1		8260C	Total/NA
Toluene	13		1.0	0.51	ug/L	1		8260C	Total/NA
Xylenes, Total	62		2.0	0.66	ug/L	1		8260C	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 480-69165-2
----------------------------

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethane	0.29	J	1.0	0.21	ug/L	1	_	8260C	Total/NA
cis-1,2-Dichloroethene	4.2		1.0	0.81	ug/L	1		8260C	Total/NA
Cyclohexane	56		1.0	0.18	ug/L	1		8260C	Total/NA
Ethylbenzene	4.1		1.0	0.74	ug/L	1		8260C	Total/NA
Isopropylbenzene	16		1.0	0.79	ug/L	1		8260C	Total/NA
Methylcyclohexane	52		1.0	0.16	ug/L	1		8260C	Total/NA
Xylenes, Total	5.6		2.0	0.66	ug/L	1		8260C	Total/NA

Client Sample ID: MW-3

#### Lab Sample ID: 480-69165-3

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac	D Method	Prep Type
Tetrachloroethene	1200	20	7.2 ug/L	20	8260C	Total/NA

Client Sample ID: MW-4

Lab Sam	ple ID:	480-691	165-4
---------	---------	---------	-------

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Typ	е
Tetrachloroethene	1100		20	7.2	ug/L	 20	8260C	Total/NA	

#### **Client Sample ID: TRIP BLANK**

#### Lab Sample ID: 480-69165-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: URS Corporation

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

Trichloroethene

Vinyl chloride

**Xylenes, Total** 

Client Sample ID: MW-1

Date Collected: 10/13/14 10:40

Date Received: 10/14/14 00:30

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

**Matrix: Water** 

Lab Sample ID: 480-69165-1

Method: 8260C - Volatile Organic Compounds by GC/MS Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac 1,1,1-Trichloroethane ND 1.0 0.82 ug/L 10/21/14 07:18 ND 1.1.2.2-Tetrachloroethane 1.0 0.21 ug/L 10/21/14 07:18 1,1,2-Trichloroethane ND 1.0 0.23 ug/L 10/21/14 07:18 ND 1,1,2-Trichloro-1,2,2-trifluoroethane 1.0 0.31 ug/L 10/21/14 07:18 1,1-Dichloroethane ND 1.0 0.38 ug/L 10/21/14 07:18 ND 1.0 ug/L 1.1-Dichloroethene 0.29 10/21/14 07:18 1,2,4-Trichlorobenzene ND 1.0 0.41 10/21/14 07:18 ug/L 1,2-Dibromo-3-Chloropropane ND 1.0 0.39 ug/L 10/21/14 07:18 1,2-Dibromoethane ND 1.0 0.73 ug/L 10/21/14 07:18 1,2-Dichlorobenzene ND 1.0 0.79 ug/L 10/21/14 07:18 1,2-Dichloroethane 0.65 1.0 0.21 ug/L 10/21/14 07:18 1,2-Dichloropropane ND 1.0 0.72 ug/L 10/21/14 07:18 1,3-Dichlorobenzene ND 1.0 0.78 ug/L 10/21/14 07:18 1,4-Dichlorobenzene ND 1.0 0.84 ug/L 10/21/14 07:18 2-Hexanone ND 5.0 1.2 ug/L 10/21/14 07:18 2-Butanone (MEK) ND 10 1.3 ug/L 10/21/14 07:18 4-Methyl-2-pentanone (MIBK) NΠ 5.0 2.1 10/21/14 07:18 ug/L ND 10 3.0 ug/L 10/21/14 07:18 Acetone 1.0 0.41 ug/L 10/21/14 07:18 **Benzene** 1.5 Bromodichloromethane ND 1.0 0.39 10/21/14 07:18 ug/L ND 0.26 Bromoform 1.0 ug/L 10/21/14 07:18 Bromomethane ND 1.0 0.69 ug/L 10/21/14 07:18 Carbon disulfide ND 1.0 0.19 ug/L 10/21/14 07:18 Carbon tetrachloride ND 1.0 0.27 ug/L 10/21/14 07:18 Chlorobenzene ND 1.0 0.75 ug/L 10/21/14 07:18 Dibromochloromethane ND 1.0 0.32 ug/L 10/21/14 07:18 Chloroethane ND 1.0 0.32 ug/L 10/21/14 07:18 Chloroform ND 1.0 0.34 ug/L 10/21/14 07:18 Chloromethane ND 1.0 0.35 ug/L 10/21/14 07:18 10/21/14 07:18 cis-1,2-Dichloroethene 2.9 1.0 0.81 ug/L cis-1,3-Dichloropropene ND 1.0 0.36 ug/L 10/21/14 07:18 1.0 0.18 10/21/14 07:18 Cyclohexane 1.3 ug/L Dichlorodifluoromethane ND 1.0 0.68 ug/L 10/21/14 07:18 1.0 0.74 ug/L 10/21/14 07:18 Ethylbenzene 18 1.0 0.79 ug/L 10/21/14 07:18 Isopropylbenzene 2.6 ND 2.5 Methyl acetate 0.50 ug/L 10/21/14 07:18 Methyl tert-butyl ether ND 1.0 0.16 ug/L 10/21/14 07:18 Methylcyclohexane 1.2 1.0 0.16 ug/L 10/21/14 07:18 ND Methylene Chloride 1.0 0.44 ug/L 10/21/14 07:18 ND Styrene 1.0 0.73 ug/L 10/21/14 07:18 ND Tetrachloroethene 1.0 0.36 ug/L 10/21/14 07:18 **Toluene** 13 1.0 0.51 ug/L 10/21/14 07:18

TestAmerica Buffalo

10/21/14 07:18

10/21/14 07:18

10/21/14 07:18

10/21/14 07:18

10/21/14 07:18

10/21/14 07:18

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1.0

1.0

10

1.0

1.0

2.0

0.90 ug/L

0.88 ug/L

0.90 ug/L

0.37 ug/L

0.46 ug/L

0.66 ug/L

ND

ND

ND

ND

ND

62

10/22/2014

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

Lab Sample ID: 480-69165-1

TestAmerica Job ID: 480-69165-1

Matrix: Water

Client Sample ID: MW-1 Date Collected: 10/13/14 10:40 Date Received: 10/14/14 00:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		66 - 137		10/21/14 07:18	1
Toluene-d8 (Surr)	107		71 - 126		10/21/14 07:18	1
4-Bromofluorobenzene (Surr)	100		73 - 120		10/21/14 07:18	1
Dibromofluoromethane (Surr)	101		60 - 140		10/21/14 07:18	1

Client Sample ID: MW-2 Lab Sample ID: 480-69165-2

Date Collected: 10/13/14 09:50 Matrix: Water

Date Received: 10/14/14 00:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/21/14 13:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/21/14 13:35	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/21/14 13:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/21/14 13:35	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/21/14 13:35	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/21/14 13:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/21/14 13:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/21/14 13:35	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/21/14 13:35	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/21/14 13:35	1
1,2-Dichloroethane	0.29	J	1.0	0.21	ug/L			10/21/14 13:35	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/21/14 13:35	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/21/14 13:35	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/21/14 13:35	1
2-Hexanone	ND		5.0	1.2	ug/L			10/21/14 13:35	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/21/14 13:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/21/14 13:35	1
Acetone	ND		10	3.0	ug/L			10/21/14 13:35	1
Benzene	ND		1.0	0.41	ug/L			10/21/14 13:35	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/21/14 13:35	1
Bromoform	ND		1.0	0.26	ug/L			10/21/14 13:35	1
Bromomethane	ND		1.0	0.69	ug/L			10/21/14 13:35	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/21/14 13:35	•
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/21/14 13:35	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/21/14 13:35	1
Dibromochloromethane	ND	*	1.0	0.32	ug/L			10/21/14 13:35	1
Chloroethane	ND		1.0	0.32	ug/L			10/21/14 13:35	1
Chloroform	ND		1.0	0.34	ug/L			10/21/14 13:35	1
Chloromethane	ND		1.0	0.35	ug/L			10/21/14 13:35	1
cis-1,2-Dichloroethene	4.2		1.0	0.81	ug/L			10/21/14 13:35	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/21/14 13:35	1
Cyclohexane	56		1.0	0.18	ug/L			10/21/14 13:35	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/21/14 13:35	1
Ethylbenzene	4.1		1.0	0.74	ug/L			10/21/14 13:35	
Isopropylbenzene	16		1.0	0.79	ug/L			10/21/14 13:35	1
Methyl acetate	ND		2.5	0.50	ug/L			10/21/14 13:35	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/21/14 13:35	
Methylcyclohexane	52		1.0		ug/L			10/21/14 13:35	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/21/14 13:35	1

TestAmerica Buffalo

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Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

Lab Sample ID: 480-69165-2

TestAmerica Job ID: 480-69165-1

10/21/14 13:35

Matrix: Water

Client Sample ID: MW-2 Date Collected: 10/13/14 09:50 Date Received: 10/14/14 00:30

ompounds b	y GC/MS (C	Continued)						
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND		1.0	0.73	ug/L			10/21/14 13:35	1
ND		1.0	0.36	ug/L			10/21/14 13:35	1
ND		1.0	0.51	ug/L			10/21/14 13:35	1
ND		1.0	0.90	ug/L			10/21/14 13:35	1
ND		1.0	0.37	ug/L			10/21/14 13:35	1
ND		1.0	0.46	ug/L			10/21/14 13:35	1
ND		1.0	0.88	ug/L			10/21/14 13:35	1
ND		1.0	0.90	ug/L			10/21/14 13:35	1
5.6		2.0	0.66	ug/L			10/21/14 13:35	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
109		66 - 137			-		10/21/14 13:35	1
98		71 - 126					10/21/14 13:35	1
99		73 - 120					10/21/14 13:35	1
	Result	Result Qualifier  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	ND       1.0         Solution       5.6         2.0         **Recovery       Qualifier       Limits         109       66 - 137         98       71 - 126	Result ND         Qualifier         RL         MDL           ND         1.0         0.73           ND         1.0         0.36           ND         1.0         0.90           ND         1.0         0.37           ND         1.0         0.46           ND         1.0         0.88           ND         1.0         0.90           5.6         2.0         0.66           **Recovery*         Qualifier         Limits           109         66 - 137         71 - 126	Result         Qualifier         RL         MDL         Unit           ND         1.0         0.73         ug/L           ND         1.0         0.36         ug/L           ND         1.0         0.51         ug/L           ND         1.0         0.90         ug/L           ND         1.0         0.37         ug/L           ND         1.0         0.46         ug/L           ND         1.0         0.90         ug/L           ND         1.0         0.90         ug/L           5.6         2.0         0.66         ug/L           %Recovery         Qualifier         Limits           109         66 - 137         98         71 - 126	Result ND         Qualifier         RL         MDL unit         D           ND         1.0         0.73 ug/L         ug/L           ND         1.0         0.36 ug/L         ug/L           ND         1.0         0.90 ug/L           ND         1.0         0.37 ug/L           ND         1.0         0.46 ug/L           ND         1.0         0.88 ug/L           ND         1.0         0.90 ug/L           5.6         2.0         0.66 ug/L           **Recovery Qualifier Limits           109         66 - 137           98         71 - 126	Result ND         Qualifier         RL         MDL Unit         D         Prepared           ND         1.0         0.73 ug/L         Ug/L	Result ND         Qualifier         RL         MDL Unit         D         Prepared         Analyzed           ND         1.0         0.73 ug/L         10/21/14 13:35           ND         1.0         0.36 ug/L         10/21/14 13:35           ND         1.0         0.90 ug/L         10/21/14 13:35           ND         1.0         0.90 ug/L         10/21/14 13:35           ND         1.0         0.46 ug/L         10/21/14 13:35           ND         1.0         0.88 ug/L         10/21/14 13:35           ND         1.0         0.80 ug/L         10/21/14 13:35           ND         1.0         0.90 ug/L         10/21/14 13:35           Solution         1.0         0.90 ug/L         10/21/14 13:35           5.6         2.0         0.66 ug/L         Prepared         Analyzed           109         66 - 137         10/21/14 13:35           98         71 - 126         10/21/14 13:35

Client Sample ID: MW-3 Lab Sample ID: 480-69165-3

60 - 140

Date Collected: 10/13/14 08:45 Matrix: Water

Date Received: 10/14/14 00:30

Dibromofluoromethane (Surr)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20	16	ug/L			10/21/14 13:59	20
1,1,2,2-Tetrachloroethane	ND		20	4.2	ug/L			10/21/14 13:59	20
1,1,2-Trichloroethane	ND		20	4.6	ug/L			10/21/14 13:59	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20	6.2	ug/L			10/21/14 13:59	20
1,1-Dichloroethane	ND		20	7.6	ug/L			10/21/14 13:59	20
1,1-Dichloroethene	ND		20	5.8	ug/L			10/21/14 13:59	20
1,2,4-Trichlorobenzene	ND		20	8.2	ug/L			10/21/14 13:59	20
1,2-Dibromo-3-Chloropropane	ND		20	7.8	ug/L			10/21/14 13:59	20
1,2-Dibromoethane	ND		20	15	ug/L			10/21/14 13:59	20
1,2-Dichlorobenzene	ND		20	16	ug/L			10/21/14 13:59	20
1,2-Dichloroethane	ND		20	4.2	ug/L			10/21/14 13:59	20
1,2-Dichloropropane	ND		20	14	ug/L			10/21/14 13:59	20
1,3-Dichlorobenzene	ND		20	16	ug/L			10/21/14 13:59	20
1,4-Dichlorobenzene	ND		20	17	ug/L			10/21/14 13:59	20
2-Hexanone	ND		100	25	ug/L			10/21/14 13:59	20
2-Butanone (MEK)	ND		200	26	ug/L			10/21/14 13:59	20
4-Methyl-2-pentanone (MIBK)	ND		100	42	ug/L			10/21/14 13:59	20
Acetone	ND		200	60	ug/L			10/21/14 13:59	20
Benzene	ND		20	8.2	ug/L			10/21/14 13:59	20
Bromodichloromethane	ND		20	7.8	ug/L			10/21/14 13:59	20
Bromoform	ND		20	5.2	ug/L			10/21/14 13:59	20
Bromomethane	ND		20	14	ug/L			10/21/14 13:59	20
Carbon disulfide	ND		20	3.8	ug/L			10/21/14 13:59	20
Carbon tetrachloride	ND		20	5.4	ug/L			10/21/14 13:59	20
Chlorobenzene	ND		20	15	ug/L			10/21/14 13:59	20
Dibromochloromethane	ND	*	20	6.4	ug/L			10/21/14 13:59	20
Chloroethane	ND		20	6.4	ug/L			10/21/14 13:59	20
Chloroform	ND		20	6.8	ug/L			10/21/14 13:59	20

TestAmerica Buffalo

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Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

Lab Sample ID: 480-69165-3

TestAmerica Job ID: 480-69165-1

Matrix: Water

Date Collected: 10/13/14 08:45 Date Received: 10/14/14 00:30

Client Sample ID: MW-3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		20	7.0	ug/L			10/21/14 13:59	20
cis-1,2-Dichloroethene	ND		20	16	ug/L			10/21/14 13:59	20
cis-1,3-Dichloropropene	ND		20	7.2	ug/L			10/21/14 13:59	20
Cyclohexane	ND		20	3.6	ug/L			10/21/14 13:59	20
Dichlorodifluoromethane	ND		20	14	ug/L			10/21/14 13:59	20
Ethylbenzene	ND		20	15	ug/L			10/21/14 13:59	20
Isopropylbenzene	ND		20	16	ug/L			10/21/14 13:59	20
Methyl acetate	ND		50	10	ug/L			10/21/14 13:59	20
Methyl tert-butyl ether	ND		20	3.2	ug/L			10/21/14 13:59	20
Methylcyclohexane	ND		20	3.2	ug/L			10/21/14 13:59	20
Methylene Chloride	ND		20	8.8	ug/L			10/21/14 13:59	20
Styrene	ND		20	15	ug/L			10/21/14 13:59	20
Tetrachloroethene	1200		20	7.2	ug/L			10/21/14 13:59	20
Toluene	ND		20	10	ug/L			10/21/14 13:59	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			10/21/14 13:59	20
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			10/21/14 13:59	20
Trichloroethene	ND		20	9.2	ug/L			10/21/14 13:59	20
Trichlorofluoromethane	ND		20	18	ug/L			10/21/14 13:59	20
Vinyl chloride	ND		20	18	ug/L			10/21/14 13:59	20
Xylenes, Total	ND		40	13	ug/L			10/21/14 13:59	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		66 - 137			-		10/21/14 13:59	20
Toluene-d8 (Surr)	99		71 - 126					10/21/14 13:59	20
4-Bromofluorobenzene (Surr)	102		73 - 120					10/21/14 13:59	20
Dibromofluoromethane (Surr)	97		60 - 140					10/21/14 13:59	20

Client Sample ID: MW-4 Lab Sample ID: 480-69165-4 Date Collected: 10/13/14 09:45 **Matrix: Water** 

Date Received: 10/14/14 00:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20	16	ug/L			10/21/14 08:33	20
1,1,2,2-Tetrachloroethane	ND		20	4.2	ug/L			10/21/14 08:33	20
1,1,2-Trichloroethane	ND		20	4.6	ug/L			10/21/14 08:33	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20	6.2	ug/L			10/21/14 08:33	20
1,1-Dichloroethane	ND		20	7.6	ug/L			10/21/14 08:33	20
1,1-Dichloroethene	ND		20	5.8	ug/L			10/21/14 08:33	20
1,2,4-Trichlorobenzene	ND		20	8.2	ug/L			10/21/14 08:33	20
1,2-Dibromo-3-Chloropropane	ND		20	7.8	ug/L			10/21/14 08:33	20
1,2-Dibromoethane	ND		20	15	ug/L			10/21/14 08:33	20
1,2-Dichlorobenzene	ND		20	16	ug/L			10/21/14 08:33	20
1,2-Dichloroethane	ND		20	4.2	ug/L			10/21/14 08:33	20
1,2-Dichloropropane	ND		20	14	ug/L			10/21/14 08:33	20
1,3-Dichlorobenzene	ND		20	16	ug/L			10/21/14 08:33	20
1,4-Dichlorobenzene	ND		20	17	ug/L			10/21/14 08:33	20
2-Hexanone	ND		100	25	ug/L			10/21/14 08:33	20
2-Butanone (MEK)	ND		200	26	ug/L			10/21/14 08:33	20
4-Methyl-2-pentanone (MIBK)	ND		100	42	ug/L			10/21/14 08:33	20

TestAmerica Buffalo

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Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

Client Sample ID: MW-4 Lab Sample ID: 480-69165-4

Date Collected: 10/13/14 09:45 Matrix: Water Date Received: 10/14/14 00:30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued) Result Qualifier **MDL** Unit D Dil Fac Analyte Prepared Analyzed Acetone ND 200 60 10/21/14 08:33 ug/L 20 ND 20 Benzene ug/L 10/21/14 08:33 20 8.2 Bromodichloromethane ND 20 7.8 ug/L 10/21/14 08:33 20 Bromoform ND 20 5.2 ug/L 10/21/14 08:33 20 Bromomethane ND 20 14 ug/L 10/21/14 08:33 20 Carbon disulfide ND 20 10/21/14 08:33 20 38 ug/L Carbon tetrachloride ND 20 5.4 ug/L 10/21/14 08:33 20 Chlorobenzene ND 20 10/21/14 08:33 20 15 ug/L Dibromochloromethane ND 20 6.4 ug/L 10/21/14 08:33 20 20 Chloroethane ND 6.4 ug/L 10/21/14 08:33 20 ND 20 Chloroform 6.8 ug/L 10/21/14 08:33 20 ND 20 20 Chloromethane 7.0 ug/L 10/21/14 08:33 cis-1,2-Dichloroethene ND 20 16 ug/L 10/21/14 08:33 20 cis-1,3-Dichloropropene ND 20 7.2 ug/L 10/21/14 08:33 20 20 20 ND ug/L 10/21/14 08:33 Cyclohexane 3.6 Dichlorodifluoromethane ND 20 ug/L 10/21/14 08:33 20 ND 20 20 Ethylbenzene 15 ug/L 10/21/14 08:33 Isopropylbenzene ND 20 10/21/14 08:33 20 16 ug/L ND 50 10/21/14 08:33 20 Methyl acetate 10 ug/L 20 Methyl tert-butyl ether ND 3.2 ug/L 10/21/14 08:33 20 Methylcyclohexane ND 20 3.2 ug/L 10/21/14 08:33 20 Methylene Chloride ND 20 20 8.8 ug/L 10/21/14 08:33 20 Styrene ND 15 ug/L 10/21/14 08:33 20 Tetrachloroethene 1100 20 7.2 ug/L 10/21/14 08:33 20 10/21/14 08:33 Toluene ND 20 ug/L 20 ND 20 ug/L 20 trans-1,2-Dichloroethene 10/21/14 08:33 18 trans-1,3-Dichloropropene 20 10/21/14 08:33 20 ND ug/L Trichloroethene ND 20 9.2 ug/L 10/21/14 08:33 20 Trichlorofluoromethane ND 20 18 ug/L 10/21/14 08:33 20 Vinyl chloride ND 20 20 18 ug/L 10/21/14 08:33 Xylenes, Total ND 40 13 ug/L 10/21/14 08:33 20 Qualifier Dil Fac Surrogate %Recovery Limits Prepared Analyzed 102 66 - 137 1,2-Dichloroethane-d4 (Surr) 10/21/14 08:33 20 102 20 Toluene-d8 (Surr) 71 - 126 10/21/14 08:33

Client Sample ID: TRIP BLANK

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Lab Sample ID: 480-69165-5 Date Collected: 10/10/14 00:00 **Matrix: Water** 

73 - 120

60 - 140

104

103

Date Received: 10/14/14 00:30

Method: 8260C - Volatile Organic O	Compounds b	y GC/MS							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/21/14 06:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/21/14 06:53	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/21/14 06:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/21/14 06:53	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/21/14 06:53	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/21/14 06:53	1

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10/21/14 08:33

10/21/14 08:33

20

20

Client: URS Corporation

Toluene-d8 (Surr)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

**Client Sample ID: TRIP BLANK** 

Lab Sample ID: 480-69165-5 Date Collected: 10/10/14 00:00

Matrix: Water

Date Received: 10/14/14 00:30

Analyte	Result Qualifie	er RL	MDL		D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND ND	1.0	0.41	ug/L			10/21/14 06:53	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			10/21/14 06:53	1
1,2-Dibromoethane	ND	1.0	0.73	ug/L			10/21/14 06:53	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L			10/21/14 06:53	1
1,2-Dichloroethane	ND	1.0	0.21	ug/L			10/21/14 06:53	1
1,2-Dichloropropane	ND	1.0	0.72	ug/L			10/21/14 06:53	1
1,3-Dichlorobenzene	ND	1.0	0.78	ug/L			10/21/14 06:53	1
1,4-Dichlorobenzene	ND	1.0	0.84	ug/L			10/21/14 06:53	1
2-Hexanone	ND	5.0	1.2	ug/L			10/21/14 06:53	1
2-Butanone (MEK)	ND	10	1.3	ug/L			10/21/14 06:53	1
4-Methyl-2-pentanone (MIBK)	ND	5.0	2.1	ug/L			10/21/14 06:53	1
Acetone	ND	10	3.0	ug/L			10/21/14 06:53	1
Benzene	ND	1.0	0.41	ug/L			10/21/14 06:53	1
Bromodichloromethane	ND	1.0	0.39	ug/L			10/21/14 06:53	1
Bromoform	ND	1.0	0.26	ug/L			10/21/14 06:53	1
Bromomethane	ND	1.0	0.69	ug/L			10/21/14 06:53	1
Carbon disulfide	ND	1.0	0.19	ug/L			10/21/14 06:53	1
Carbon tetrachloride	ND	1.0	0.27	ug/L			10/21/14 06:53	1
Chlorobenzene	ND	1.0	0.75	ug/L			10/21/14 06:53	1
Dibromochloromethane	ND	1.0	0.32				10/21/14 06:53	1
Chloroethane	ND	1.0	0.32	ug/L			10/21/14 06:53	1
Chloroform	ND	1.0	0.34				10/21/14 06:53	1
Chloromethane	ND	1.0	0.35				10/21/14 06:53	1
cis-1,2-Dichloroethene	ND	1.0		ug/L			10/21/14 06:53	1
cis-1,3-Dichloropropene	ND	1.0	0.36	ug/L			10/21/14 06:53	1
Cyclohexane	ND	1.0	0.18	ug/L			10/21/14 06:53	1
Dichlorodifluoromethane	ND *	1.0	0.68	ug/L			10/21/14 06:53	1
Ethylbenzene	ND	1.0	0.74	ug/L			10/21/14 06:53	1
Isopropylbenzene	ND	1.0	0.79	ug/L			10/21/14 06:53	1
Methyl acetate	ND	2.5	0.50	ug/L			10/21/14 06:53	1
Methyl tert-butyl ether	ND	1.0	0.16	ug/L			10/21/14 06:53	1
Methylcyclohexane	ND	1.0	0.16	ug/L			10/21/14 06:53	1
Methylene Chloride	ND	1.0	0.44	ug/L			10/21/14 06:53	1
Styrene	ND	1.0	0.73	ug/L			10/21/14 06:53	1
Tetrachloroethene	ND	1.0		ug/L			10/21/14 06:53	1
Toluene	ND	1.0	0.51	-			10/21/14 06:53	1
trans-1,2-Dichloroethene	ND	1.0		ug/L			10/21/14 06:53	1
trans-1,3-Dichloropropene	ND	1.0		ug/L			10/21/14 06:53	1
Trichloroethene	ND	1.0		ug/L			10/21/14 06:53	1
Trichlorofluoromethane	ND	1.0		ug/L			10/21/14 06:53	1
Vinyl chloride	ND	1.0		ug/L			10/21/14 06:53	1
Xylenes, Total	ND	2.0		ug/L			10/21/14 06:53	1
Surrogate	%Recovery Qualifie	er Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	66 - 137			-		10/21/14 06:53	1

TestAmerica Buffalo

10/21/14 06:53

10/21/14 06:53

10/21/14 06:53

71 - 126

73 - 120

60 - 140

100

101

#### **Surrogate Summary**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

#### Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water Prep Type: Total/NA

				Percent Sur	rrogate Rec
		12DCE	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(71-126)	(73-120)	(60-140)
480-69165-1	MW-1	108	107	100	101
480-69165-2	MW-2	109	98	99	97
480-69165-3	MW-3	93	99	102	97
480-69165-3 MS	MW-3	91	97	102	98
480-69165-3 MSD	MW-3	92	99	102	99
480-69165-4	MW-4	102	102	104	103
480-69165-4 MS	MW-4	100	100	102	102
480-69165-4 MSD	MW-4	99	101	101	101
480-69165-5	TRIP BLANK	101	100	101	103
LCS 480-208917/4	Lab Control Sample	101	102	102	102
LCS 480-209000/5	Lab Control Sample	91	97	99	98
MB 480-208917/7	Method Blank	98	99	101	100
MB 480-209000/7	Method Blank	92	99	103	99

#### Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

2

3

8

4.6

11

14

#### **QC Sample Results**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

#### Method: 8260C - Volatile Organic Compounds by GC/MS

MB MB

Lab Sample ID: MB 480-208917/7

**Matrix: Water** 

Analysis Batch: 208917

Trichlorofluoromethane

Vinyl chloride

Xylenes, Total

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			10/21/14 01:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/21/14 01:35	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/21/14 01:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/21/14 01:35	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/21/14 01:35	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/21/14 01:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/21/14 01:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/21/14 01:35	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/21/14 01:35	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/21/14 01:35	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/21/14 01:35	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/21/14 01:35	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/21/14 01:35	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/21/14 01:35	1
2-Hexanone	ND		5.0	1.2	ug/L			10/21/14 01:35	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/21/14 01:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/21/14 01:35	1
Acetone	ND		10	3.0	ug/L			10/21/14 01:35	1
Benzene	ND		1.0	0.41	ug/L			10/21/14 01:35	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/21/14 01:35	1
Bromoform	ND		1.0	0.26	ug/L			10/21/14 01:35	1
Bromomethane	ND		1.0	0.69	ug/L			10/21/14 01:35	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/21/14 01:35	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/21/14 01:35	1
Chlorobenzene	ND		1.0		ug/L			10/21/14 01:35	1
Dibromochloromethane	ND		1.0		ug/L			10/21/14 01:35	1
Chloroethane	ND		1.0	0.32	ug/L			10/21/14 01:35	1
Chloroform	ND		1.0	0.34	ug/L			10/21/14 01:35	1
Chloromethane	ND		1.0	0.35	ug/L			10/21/14 01:35	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/21/14 01:35	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/21/14 01:35	1
Cyclohexane	ND		1.0	0.18	ug/L			10/21/14 01:35	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/21/14 01:35	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/21/14 01:35	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/21/14 01:35	1
Methyl acetate	ND		2.5	0.50	ug/L			10/21/14 01:35	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/21/14 01:35	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/21/14 01:35	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/21/14 01:35	1
Styrene	ND		1.0		ug/L			10/21/14 01:35	1
Tetrachloroethene	ND		1.0		ug/L			10/21/14 01:35	1
Toluene	ND		1.0		ug/L			10/21/14 01:35	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			10/21/14 01:35	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			10/21/14 01:35	1
Trichloroethene	ND		1.0		ug/L			10/21/14 01:35	1
_:-:-:					<del></del>				

TestAmerica Buffalo

10/22/2014

10/21/14 01:35

10/21/14 01:35

10/21/14 01:35

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1.0

1.0

2.0

0.88 ug/L

0.90 ug/L

0.66 ug/L

ND

ND

ND

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-208917/7

**Matrix: Water** 

Analysis Batch: 208917

Client Sample ID: Method Blank

Prep Type: Total/NA

	IVIB	MB						
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	98		66 - 137	<del>-</del>		10/21/14 01:35	1	
Toluene-d8 (Surr)	99		71 - 126			10/21/14 01:35	1	
4-Bromofluorobenzene (Surr)	101		73 - 120			10/21/14 01:35	1	
Dibromofluoromethane (Surr)	100		60 - 140			10/21/14 01:35	1	

Lab Sample ID: LCS 480-208917/4

**Matrix: Water** 

Analysis Batch: 208917

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

<b>,</b>	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethane	25.0	24.4		ug/L		98	71 - 129
1,1-Dichloroethene	25.0	22.9		ug/L		92	58 <sub>-</sub> 121
1,2-Dichlorobenzene	25.0	24.3		ug/L		97	80 - 124
1,2-Dichloroethane	25.0	23.6		ug/L		94	75 <sub>-</sub> 127
Benzene	25.0	23.9		ug/L		96	71 - 124
Chlorobenzene	25.0	23.9		ug/L		96	72 <sub>-</sub> 120
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	74 <sub>-</sub> 124
Ethylbenzene	25.0	23.8		ug/L		95	77 - 123
Methyl tert-butyl ether	25.0	26.5		ug/L		106	64 _ 127
Tetrachloroethene	25.0	24.5		ug/L		98	74 - 122
Toluene	25.0	24.4		ug/L		98	80 _ 122
trans-1,2-Dichloroethene	25.0	23.5		ug/L		94	73 _ 127
Trichloroethene	25.0	23.6		ug/L		94	74 - 123

LCS	LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
Toluene-d8 (Surr)	102		71 - 126
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	102		60 - 140

Lab Sample ID: 480-69165-4 MS

**Matrix: Water** 

Analysis Batch: 208917

Client Sample ID: WW	4
Prep Type: Total/N	Α

-	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethane	ND		500	486		ug/L		97	71 - 129
1,1-Dichloroethene	ND		500	463		ug/L		93	58 - 121
1,2-Dichlorobenzene	ND		500	471		ug/L		94	80 - 124
1,2-Dichloroethane	ND		500	466		ug/L		93	75 - 127
Benzene	ND		500	470		ug/L		94	71 - 124
Chlorobenzene	ND		500	482		ug/L		96	72 - 120
cis-1,2-Dichloroethene	ND		500	488		ug/L		98	74 - 124
Ethylbenzene	ND		500	466		ug/L		93	77 - 123
Methyl tert-butyl ether	ND		500	510		ug/L		102	64 - 127
Tetrachloroethene	1100		500	1390	F1	ug/L		63	74 - 122
Toluene	ND		500	484		ug/L		97	80 - 122
trans-1,2-Dichloroethene	ND		500	467		ug/L		93	73 - 127
Trichloroethene	ND		500	471		ug/L		94	74 - 123

TestAmerica Buffalo

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-69165-4 MS

**Matrix: Water** 

Analysis Batch: 208917

Client Sample ID: MW-4 Prep Type: Total/NA

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		66 - 137
Toluene-d8 (Surr)	100		71 - 126
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	102		60 - 140

Client Sample ID: MW-4

Prep Type: Total/NA

Analysis Batch: 208917

**Matrix: Water** 

Lab Sample ID: 480-69165-4 MSD

randijoto Zatom Zocom											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethane	ND		500	501		ug/L		100	71 - 129	3	20
1,1-Dichloroethene	ND		500	486		ug/L		97	58 <sub>-</sub> 121	5	16
1,2-Dichlorobenzene	ND		500	484		ug/L		97	80 - 124	3	20
1,2-Dichloroethane	ND		500	476		ug/L		95	75 - 127	2	20
Benzene	ND		500	490		ug/L		98	71 - 124	4	13
Chlorobenzene	ND		500	505		ug/L		101	72 - 120	5	25
cis-1,2-Dichloroethene	ND		500	503		ug/L		101	74 - 124	3	15
Ethylbenzene	ND		500	489		ug/L		98	77 - 123	5	15
Methyl tert-butyl ether	ND		500	513		ug/L		103	64 - 127	1	37
Tetrachloroethene	1100		500	1450		ug/L		76	74 - 122	4	20
Toluene	ND		500	500		ug/L		100	80 - 122	3	15
trans-1,2-Dichloroethene	ND		500	493		ug/L		99	73 - 127	5	20
Trichloroethene	ND		500	498		ug/L		100	74 - 123	6	16

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		66 - 137
Toluene-d8 (Surr)	101		71 - 126
4-Bromofluorobenzene (Surr)	101		73 - 120
Dibromofluoromethane (Surr)	101		60 - 140

**Client Sample ID: Method Blank** Prep Type: Total/NA

Analysis Batch: 209000

**Matrix: Water** 

Lab Sample ID: MB 480-209000/7

мв мв

	IND IND							
Analyte	Result Qualifi	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	ug/L			10/21/14 12:15	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			10/21/14 12:15	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L			10/21/14 12:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			10/21/14 12:15	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L			10/21/14 12:15	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L			10/21/14 12:15	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			10/21/14 12:15	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			10/21/14 12:15	1
1,2-Dibromoethane	ND	1.0	0.73	ug/L			10/21/14 12:15	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L			10/21/14 12:15	1
1,2-Dichloroethane	ND	1.0	0.21	ug/L			10/21/14 12:15	1
1,2-Dichloropropane	ND	1.0	0.72	ug/L			10/21/14 12:15	1
1,3-Dichlorobenzene	ND	1.0	0.78	ug/L			10/21/14 12:15	1

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TestAmerica Job ID: 480-69165-1

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

#### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-209000/7 Client Sample ID: Method Blank **Matrix: Water Prep Type: Total/NA** 

Analysis Batch: 209000

	MB	MB							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/21/14 12:15	1
2-Hexanone	ND		5.0	1.2	ug/L			10/21/14 12:15	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/21/14 12:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/21/14 12:15	1
Acetone	ND		10	3.0	ug/L			10/21/14 12:15	1
Benzene	ND		1.0	0.41	ug/L			10/21/14 12:15	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/21/14 12:15	1
Bromoform	ND		1.0	0.26	ug/L			10/21/14 12:15	1
Bromomethane	ND		1.0	0.69	ug/L			10/21/14 12:15	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/21/14 12:15	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/21/14 12:15	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/21/14 12:15	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/21/14 12:15	1
Chloroethane	ND		1.0	0.32	ug/L			10/21/14 12:15	1
Chloroform	ND		1.0	0.34	ug/L			10/21/14 12:15	1
Chloromethane	ND		1.0	0.35	ug/L			10/21/14 12:15	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/21/14 12:15	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/21/14 12:15	1
Cyclohexane	ND		1.0	0.18	ug/L			10/21/14 12:15	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/21/14 12:15	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/21/14 12:15	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/21/14 12:15	1
Methyl acetate	ND		2.5	0.50	ug/L			10/21/14 12:15	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/21/14 12:15	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/21/14 12:15	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/21/14 12:15	1
Styrene	ND		1.0	0.73	ug/L			10/21/14 12:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/21/14 12:15	1
Toluene	ND		1.0	0.51	ug/L			10/21/14 12:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/21/14 12:15	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/21/14 12:15	1
Trichloroethene	ND		1.0	0.46	ug/L			10/21/14 12:15	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/21/14 12:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/21/14 12:15	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/21/14 12:15	1

	MB	MB			
Surrogate	%Recovery	Qualifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92	66 - 13	7	10/21/14 12:15	1
Toluene-d8 (Surr)	99	71 - 12	6	10/21/14 12:15	1
4-Bromofluorobenzene (Surr)	103	73 - 12	0	10/21/14 12:15	1
Dibromofluoromethane (Surr)	99	60 - 14	0	10/21/14 12:15	1

Lab Sample ID: LCS 480-209000/5

**Matrix: Water** 

Analysis Batch: 209000								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethane	25.0	24.4		ug/L		98	71 - 129	

Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

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TestAmerica Job ID: 480-69165-1

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

#### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-209000/5

Matrix: Water

Analysis Batch: 209000

Client Sample ID: Lab Control Sample Prep Type: Total/NA

LCS LCS %Rec. Spike Analyte Added Result Qualifier Limits Unit %Rec 1,1-Dichloroethene 25.0 99 58 - 121 24.8 ug/L 1,2-Dichlorobenzene 25.0 25.4 ug/L 102 80 - 124 1,2-Dichloroethane 25.0 22.7 75 - 127 ug/L 91 Benzene 25.0 24.8 ug/L 99 71 - 124 Chlorobenzene 25.0 25.3 101 72 - 120 ug/L cis-1,2-Dichloroethene 25.0 ug/L 74 - 124 Ethylbenzene 25.0 24.8 ug/L 99 77 - 123Methyl tert-butyl ether 25.0 24.4 ug/L 98 64 - 127 ug/L Tetrachloroethene 25.0 25.0 100 74 - 122 80 - 122 Toluene 25.0 24.8 ug/L 99 trans-1,2-Dichloroethene 25.0 25.3 101 73 \_ 127 ug/L Trichloroethene 25.0 25.0 ug/L 100 74 - 123

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		66 - 137
Toluene-d8 (Surr)	97		71 - 126
4-Bromofluorobenzene (Surr)	99		73 - 120
Dibromofluoromethane (Surr)	98		60 - 140

Lab Sample ID: 480-69165-3 MS

Matrix: Water

Analysis Batch: 209000

Client Sample ID: MW-3 Prep Type: Total/NA

Analysis Baton. 200000									
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethane	ND		500	493		ug/L		99	71 - 129
1,1-Dichloroethene	ND		500	503		ug/L		101	58 <sub>-</sub> 121
1,2-Dichlorobenzene	ND		500	515		ug/L		103	80 _ 124
1,2-Dichloroethane	ND		500	461		ug/L		92	75 - 127
Benzene	ND		500	497		ug/L		99	71 - 124
Chlorobenzene	ND		500	499		ug/L		100	72 <sub>-</sub> 120
cis-1,2-Dichloroethene	ND		500	495		ug/L		99	74 <sub>-</sub> 124
Ethylbenzene	ND		500	498		ug/L		100	77 - 123
Methyl tert-butyl ether	ND		500	497		ug/L		99	64 - 127
Tetrachloroethene	1200		500	1410	F1	ug/L		41	74 <sub>-</sub> 122
Toluene	ND		500	498		ug/L		100	80 _ 122
trans-1,2-Dichloroethene	ND		500	490		ug/L		98	73 - 127
Trichloroethene	ND		500	508		ug/L		102	74 - 123

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		66 - 137
Toluene-d8 (Surr)	97		71 - 126
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	98		60 - 140

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#### **QC Sample Results**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

#### Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 480-69165-3 MSD

**Matrix: Water** 

Analysis Batch: 209000

Prep Type: Total/NA

-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethane	ND		500	483		ug/L		97	71 - 129	2	20
1,1-Dichloroethene	ND		500	477		ug/L		95	58 - 121	5	16
1,2-Dichlorobenzene	ND		500	506		ug/L		101	80 - 124	2	20
1,2-Dichloroethane	ND		500	454		ug/L		91	75 - 127	2	20
Benzene	ND		500	483		ug/L		97	71 - 124	3	13
Chlorobenzene	ND		500	502		ug/L		100	72 - 120	1	25
cis-1,2-Dichloroethene	ND		500	492		ug/L		98	74 - 124	1	15
Ethylbenzene	ND		500	489		ug/L		98	77 - 123	2	15
Methyl tert-butyl ether	ND		500	490		ug/L		98	64 - 127	1	37
Tetrachloroethene	1200		500	1400	F1	ug/L		40	74 - 122	1	20
Toluene	ND		500	488		ug/L		98	80 - 122	2	15
trans-1,2-Dichloroethene	ND		500	496		ug/L		99	73 - 127	1	20
Trichloroethene	ND		500	490		ug/L		98	74 - 123	4	16

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		66 - 137
Toluene-d8 (Surr)	99		71 - 126
4-Bromofluorobenzene (Surr)	102		73 - 120
Dibromofluoromethane (Surr)	99		60 - 140

Client Sample ID: MW-3

### **QC Association Summary**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

#### **GC/MS VOA**

#### Analysis Batch: 208917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-69165-1	MW-1	Total/NA	Water	8260C	
480-69165-4	MW-4	Total/NA	Water	8260C	
480-69165-4 MS	MW-4	Total/NA	Water	8260C	
480-69165-4 MSD	MW-4	Total/NA	Water	8260C	
480-69165-5	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-208917/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-208917/7	Method Blank	Total/NA	Water	8260C	

#### Analysis Batch: 209000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-69165-2	MW-2	Total/NA	Water	8260C	
480-69165-3	MW-3	Total/NA	Water	8260C	
480-69165-3 MS	MW-3	Total/NA	Water	8260C	
480-69165-3 MSD	MW-3	Total/NA	Water	8260C	
LCS 480-209000/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-209000/7	Method Blank	Total/NA	Water	8260C	

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Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

Lab Sample ID: 480-69165-1

Matrix: Water

Date Collected: 10/13/14 10:40 Date Received: 10/14/14 00:30

Client Sample ID: MW-2

Date Collected: 10/13/14 09:50

Date Received: 10/14/14 00:30

Date Collected: 10/13/14 08:45

Client Sample ID: MW-1

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C			208917	10/21/14 07:18	LCH	TAL BUF

Lab Sample ID: 480-69165-2

Matrix: Water

Matrix: Water

Batch Batch Dilution Batch Prepared Method Factor Prep Type Туре Run Number or Analyzed Analyst Lab Total/NA 8260C 209000 10/21/14 13:35 GTG TAL BUF Analysis

Client Sample ID: MW-3 Lab Sample ID: 480-69165-3

Date Received: 10/14/14 00:30

Dilution Batch Batch Batch Prepared

Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 8260C 209000 Total/NA Analysis 20 10/21/14 13:59 GTG TAL BUF

Lab Sample ID: 480-69165-4 Client Sample ID: MW-4

Date Collected: 10/13/14 09:45 **Matrix: Water** Date Received: 10/14/14 00:30

Batch Batch Dilution Batch Prepared Method Prep Type Туре Factor Number or Analyzed Run Analyst Lab Total/NA Analysis 8260C 20 208917 10/21/14 08:33 LCH TAL BUF

Client Sample ID: TRIP BLANK Lab Sample ID: 480-69165-5

Date Collected: 10/10/14 00:00 **Matrix: Water** 

Date Received: 10/14/14 00:30

Batch Dilution Batch Batch Prepared Method Prep Type Type Run Factor Number or Analyzed Analyst Lab 8260C Analysis 208917 TAL BUF Total/NA 10/21/14 06:53 LCH

**Laboratory References:** 

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# **Certification Summary**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

# Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	<b>Expiration Date</b>
New York	NELAP	2	10026	03-31-15

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# **Method Summary**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF

#### **Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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# **Sample Summary**

Client: URS Corporation

Project/Site: Walgreens Site (Kingston, NY)

TestAmerica Job ID: 480-69165-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-69165-1	MW-1	Water	10/13/14 10:40	10/14/14 00:30
480-69165-2	MW-2	Water	10/13/14 09:50	10/14/14 00:30
480-69165-3	MW-3	Water	10/13/14 08:45	10/14/14 00:30
480-69165-4	MW-4	Water	10/13/14 09:45	10/14/14 00:30
480-69165-5	TRIP BLANK	Water	10/10/14 00:00	10/14/14 00:30

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# **Chain of Custody Record**

TestAmerica Albany

Albany, NY 12205 25 Kraft Road

TestAmericon
THE LEASER IN ENURONMENTAL TESTING

	Sampler: V M V V Lab PM:	Carrier Tracking No(s):	COC No:
Client Information	してること	פסמ ר	400-303/8-140//
Olen Conac. Michael Kuzia-Camel	1575-364-0175 melissa.de	E-wat. melissa.deyo@testamericainc.com	rage. Page 1 of 1
Company: URS Corporation		Analysis Requested	252 88/885C # doc
Address: 3 Corporate Drive, Suite 203			Preservation Codes:
City: Clifton Park	ested (days):		A - FUL M - REXAME B - NaOH N - None C - Zn Acetate O - AsNaO2
State, Zip: NY, 12065	\co\		
Phone: 518-688-0015(Tel)	Po # O O O O O O O O O O O O O O O O O O		F - MeOn G - Amchlor H - Ascorbic Acid
Email: michaei.kuzia-carmel@urs.com	N-10		I - Ice J - DI Water
Project Name: Walgreens Site (Kingston, NY)			
Site:	gm <b>a</b> &		of od
	Sample Matrix of Type (Windowsky Esselet Essel	00 - TCL Vo	iedmuŅ ik
Sample Identification	G=grab) BT=TISSUE, A=AIT) E		Special Instructions/Note:
14(D-1	/	Control of the Contro	
MW-3	10/3/14 0950 G Water		E-CASE
MW-3	10845 (	×	
h-01	10/13/14 0945 G Water	X	
Tro Blank	10/10/14 Water		in of Custody
	VIC 11		
		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	Received longer than 1 month)
Non-Hazard Flammable Skin Initant Poison B	Unknown Radiological	Return To Client Disposal By Lab	Archive For Months
Deliverable requested: I, II, III, IV, Other (specity)		Special instructions/UC Kequirements:	
Υ Σ	Date:	Method of S	
Relinguished by.	12014-1415	Melle	13-14 14:15 Company 14
Reinquished by	Date-Time: / 18:100 Company	Monthsow Date-Ting	
	Date/Time: Company	Date/ In	Company
Custody Seals Intact Custody Seal No.:  Δ Yes Δ No		Cooler Temperature(s) <sup>3</sup> C and Other Remarks:	3:0#1
	1	1 1 1	

# **Login Sample Receipt Checklist**

Client: URS Corporation Job Number: 480-69165-1

Login Number: 69165 List Source: TestAmerica Buffalo

List Number: 1 Creator: Kolb, Chris M

Creator. Rolls, Cliris W		
Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or ampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
cooler Temperature is recorded.	True	
OC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
ample Preservation Verified	True	
here is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
OA sample vials do not have headspace or bubble is <6mm (1/4") in liameter.	True	
f necessary, staff have been informed of any short hold time or quick TAT needs	True	
flultiphasic samples are not present.	True	
amples do not require splitting or compositing.	True	
Sampling Company provided.	True	urs corp.
samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

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# APPENDIX B IC/EC CERTIFICATION



# Enclosure 2 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form



				Site Details	Box 1	
;	Site	No.	C356032			
;	Site	Name 10	East Chester Street			
(	City Cou	Address: : //Town: Kir unty:Ulster Acreage:	ngston	ip Code: 12401 <sub>.</sub>		
	Rep	orting Perio	od: October 26, 2 <del>012</del> to No	ovember 30, 2014		
			56		YES	NO
	1.	Is the infor	mation above correct?		9	
		If NO, inclu	ide handwritten above or or	n a separate sheet.		
	2.	Has some tax map an	or all of the site property be nendment during this Repo	een sold, subdivided, merged, or undergone a rting Period?		B.
	3.	Has there I (see 6NYC	been any change of use at t RR 375-1.11(d))?	the site during this Reporting Period		o o
	4.	Have any t	ederal, state, and/or local p property during this Repo	permits (e.g., building, discharge) been issued riting Period?		5
		lf you ans that docu	wered YES to questions 2 nentation has been previ	2 thru 4, include documentation or evidence ously submitted with this certification form.		
	5.	Is the site	currently undergoing develo	opment?		₫
					Box 2	
					YES	NO
	6.	Is the curre	ent site use consistent with al and Industrial	the use(s) listed below?	<b></b>	
	7.	Are all ICs	/ECs in place and functionii	ng as designed?		
		IF T	HE ANSWER TO EITHER Q DO NOT COMPLETE THE	QUESTION 6 OR 7 IS NO, sign and date below a REST OF THIS FORM. Otherwise continue.	nd	
	A C	Corrective N	leasures Work Plan must b	oe submitted along with this form to address th	nese iss	ues.
	Sig	nature of Ov	wner, Remedial Party or Desi	ignated Representative Date		

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?  If you answered YES to question 8, Include documentation or evidence that documentation has been previously submitted with this certification form.  9. Are the assumptions in the Qualitative Exposure Assessment still valid?  (The Qualitative Exposure Assessment must be certified every five years)  If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.  SITE NO. C356032  Description of Institutional Controls  An updated Qualitative Exposure Assessment has been included.	· Notes		Box 2	A
Assessment regarding offsite contamination are no longer valid?  If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.  9. Are the assumptions in the Qualitative Exposure Assessment still valid?  (The Qualitative Exposure Assessment must be certified every five years)  If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.  SITE NO. C356032  Description of Institutional Controls  An updated Qualitative Exposure Assessment has been included.			YES	NO
that documentation has been previously submitted with this certification form.  9. Are the assumptions in the Qualitative Exposure Assessment still valid?  (The Qualitative Exposure Assessment must be certified every five years)  If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.  SITE NO. C356032  Description of Institutional Controls  An updated Qualitative Exposure Assessment has been included.	Assessment regarding offsite contamina	ation are no longer valid?		
(The Qualitative Exposure Assessment must be certified every five years)  If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.  SITE NO. C356032  Description of Institutional Controls  An updated Qualitative Exposure Assessment has been included.	If you answered YES to question 8, in that documentation has been previou	nclude documentation or evidence usly submitted with this certification form.		
Description of Institutional Controls  Description of Institutional Controls  An updated Qualitative Exposure Assessment has been included.	<ol> <li>Are the assumptions in the Qualitative E (The Qualitative Exposure Assessment)</li> </ol>	Exposure Assessment still valid? must be certified every five years)		
Description of Institutional Controls  An updated Qualitative  Exposure Assessment has been included.	If you answered NO to question 9, the updated Qualitative Exposure Assess	e Periodic Review Report must include an sment based on the new assumptions.		
Description of Institutional Controls  An updated Qualitative Exposure Assessment has been included.	SITE NO. C356032		Во	x 3
been included.	Description of Institutional Controls	La An woodated Qual	itati	ve
been included.		Prossure Avermer	nt h	195
		been included.		
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Parcel Owner Institution Steiner, Walgreens Co.

Groun

Institutional Control

Ground Water Use Restriction Soil Management Plan Landuse Restriction

Site Management Plan

The Controlled Property may be used for restricted commercial or industrial use as long as the following long-term engineering controls are employed:

1. A barrier layer must be maintained on the Controlled Property of either one foot of clean fill or an alternative barrier layer approved by the NYSDEC, such as concrete, asphalt, or structure;

- 2. Any proposed soil excavation on the Controlled Property below the barrier layer requires prior notification and approval by NYSDEC in accordance with the Site Management Plan. The excavated soil must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and directives;
- 3. Any area of soil excavation below the barrier layer that is to be returned to vegetated soil (i.e.: not concrete, asphalt or structures) must be backfilled with a minimum one (1) foot layer of clean fill underlain by a demarcation layer;

4. Any future structures shall be constructed with a sub-slab depressurization system approved by the NYSDEC; and

5. The use of groundwater underlying the Controlled Property is prohibited without prior approval from NYSDEC for treatment rendering it safe for use for drinking or industrial purposes.

56.26-11-15

Richard N. Steiner, Walgreens Co.

Site Management Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction

The Controlled Property may be used for restricted commercial or industrial use as long as the following long-term engineering controls are employed:

 A barrier layer must be maintained on the Controlled Property of either one foot of clean fill or an alternative barrier layer approved by the NYSDEC, such as concrete, asphalt, or structure;

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4. Any future structures shall be constructed with a sub-slab depressurization system approved by the NYSDEC; and

5. The use of groundwater underlying the Controlled Property is prohibited without prior approval from NYSDEC for treatment rendering it safe for use for drinking or industrial purposes.

56.26-11-43

Richard N. Steiner, Walgreens Co.

Ground Water Use Restriction Soil Management Plan Landuse Restriction

Site Management Plan

The Controlled Property may be used for restricted commercial or industrial use as long as the following long-term engineering controls are employed:

1. A barrier layer must be maintained on the Controlled Property of either one foot of clean fill or an alternative barrier layer approved by the NYSDEC, such as concrete, asphalt, or structure;

2. Any proposed soil excavation on the Controlled Property below the barrier layer requires prior notification and approval by NYSDEC in accordance with the Site Management Plan. The excavated soil must be managed, characterized, and properly disposed of in accordance with NYSDEC regulations and directives;

3. Any area of soil excavation below the barrier layer that is to be returned to vegetated soil (i.e.: not concrete, asphalt or structures) must be backfilled with a minimum one (1) foot layer of clean fill underlain by a demarcation layer;

4. Any future structures shall be constructed with a sub-slab depressurization system approved by the NYSDEC; and

5. The use of groundwater underlying the Controlled Property is prohibited without prior approval from NYSDEC for treatment rendering it safe for use for drinking or industrial purposes.

Box 4

Description of Engineering Controls

Parcel Engineering Control

Vapor Mitigation
Cover System

Vapor Mitigation
Vapor Mitigation
Vapor Mitigation
Vapor Mitigation
Vapor Mitigation
Cover System
Vapor Mitigation
Cover System

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Periodic Review Report (PRR) Certification Statements
certify by checking "YES" below that:
<ul> <li>a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;</li> </ul>
b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted
engineering practices; and the information presented is accurate and compete.  YES NO
If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:
<ul><li>(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;</li></ul>
<ul><li>(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;</li></ul>
<ul><li>(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;</li></ul>
<ul> <li>(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and</li> </ul>
(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.
YES NO
IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.
A Corrective Measures Work Plan must be submitted along with this form to address these issues.
Signature of Owner, Remedial Party or Designated Representative Date

## IC CERTIFICATIONS SITE NO. C356032

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I JEFFREY GROWCK! at 10 Fast Chester St. Knydon, NY 12701.

print name print business address

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Date

Rendering Certification

## IC/EC CERTIFICATIONS

Box 7

# **Professional Engineer Signature**

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

N
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# APPENDIX C QUALITATIVE HUMAN HEALTH RISK ASSESSMENT



## WALGREEN COMPANY

104 Wilmot Road MS#1630 Deerfield, Illinois 60015

## QUALITATIVE HUMAN HEALTH RISK ASSESSMENT

# WALGREEN COMPANY STORE 02077 10 EAST CHESTER STREET KINGSTON, NEW YORK

BCP Site No. C356032

December 2014

**Prepared By:** 



URS Corporation – New York 3 Corporate Drive, Suite 203 Clifton Park, New York 12065



# **TABLE OF CONTENTS**

1.0	INTRODUCTION	1
2.0	IDENTIFICATION OF CHEMICALS OF POTENTIAL CONCERN	1
3.0	EXPOSURE PATHWAYS	2
3.1	SOIL	2
3.2	SOIL VAPOR/INDOOR AIR	3
3.3	OUTDOOR AIR	3
3.4	GROUNDWATER	3
4.0	SUMMARY	4

# **TABLES**

Table 1	Contaminants of Potential Concern
Table 2	Potential Pathways of Exposure, Current Use Scenario
Table 3	Potential Pathways of Exposure, Future Use Scenario



#### 1.0 INTRODUCTION

This *Qualitative Human Health Exposure Assessment (HHEA)* uses data and information collected during investigations at the site to assess human health exposure in the immediate and surrounding areas. The qualitative *HHEA* provides an evaluation of potential adverse health effects under current and potential future site conditions that may result from exposure to contaminants attributable to former activities at the site.

### 2.0 IDENTIFICATION OF CHEMICALS OF POTENTIAL CONCERN

Sampling and analysis at the site have indicated that the site has been impacted by volatile organic compounds (VOCs). The VOC impacts may be attributed to historical site activities including the former dry cleaning facility, the former gasoline service station, and former trolley barn. The 2005 *Remedial Investigation Report/Remedial Action Plan* concluded that there is no evidence that the site is impacted with semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), or metals.

The contaminants of potential concern (CPCs) were selected based on the frequency of detection, range of concentrations, and potential for migration, as well as whether the detected analytes exceeded applicable standards, criteria, or guidance values (SCGs) for the media. A "medium of potential concern" is identified as a physical medium (soil, groundwater, soil vapor) in which one or more contaminants were detected at concentrations exceeding their SCGs.

VOCs were detected in subsurface soil. Soil analytical results were compared to Part 375 unrestricted use criteria. Table 1 presents a summary of the CPCs for subsurface soil.

VOCs were detected in groundwater. For groundwater, the SCGs are the Class GA (groundwater) standards and guidance values presented in *NYSDEC TOGS 1.1.1*, April 2000 (including subsequent revisions). All VOCs detected in groundwater that exceeded SCGs are considered CPCs. Table 1 presents a summary of CPCs for groundwater.

Soil gas samples have also been sampled at the site and found to contain VOCs. There are no criteria for soil vapor analytical data; however, the *NYSDOH Soil Vapor Guidance Decision Matrix 1 and 2* (NYSDOH, 2006 with 2008 updates) were utilized to evaluate the potential for soil vapor intrusion by reviewing sub-slab vapor concentrations for the VOCs relevant to the Decision Matrices. Soil gas samples



were collected after the installation of the sub-slab depressurization system. At the time of the evaluation, only two compounds that were detected had been assigned to Decision Matrices. Carbon tetrachloride and tetrachloroethene were detected in the indoor air samples, but were not detected in the soil gas samples collected from the sub-slab. At the time of reporting the sampling results, Matrix 1 indicated that "reasonable and practical actions to identify sources and reduce exposures" for carbon tetrachloride should be taken and Matrix 2 indicated that the tetrachlororethene concentrations require "no further action." In order to be conservative, these compounds are considered CPCs for soil gas as indicated on Table 1.

#### 3.0 EXPOSURE PATHWAYS

An exposure pathway is the manner by which an individual may come in contact with a contaminant. The elements of a completed exposure pathway include: the contaminated environmental media (i.e., soil, water, or soil vapor); the receptor (e.g., construction worker, employee, public) exposed to the contamination; and the routes of exposure or how the contaminant enters the body (i.e., inhalation, ingestion, and/or absorption through the skin). Tables 2 and 3 present the exposure pathways assessed for the site under current and future land use scenarios, respectively.

## 3.1 SOIL

The site is a commercial property and operates as a retail store. There is no surface soil at the site since the entire surface of the site is covered by the building, sidewalks, and/or a six-inch thick layer of concrete. The six-inch layer of concrete is an engineering control identified for the site. The limited soil present around trees planted in the landscaped areas around the site is clean, imported topsoil material. Subsurface soil is not accessible to the general public because soil on the property is entirely covered by the building and concrete or clean top soil. The only potential complete exposure is for construction workers who could come into contact with contaminated soil during intrusive activities. Therefore, subsurface soil is considered a potentially complete exposure pathway under the current use scenario for construction workers. Under the future use scenario, intrusive activities from possible construction efforts may result in a completed pathway. The approved *Site Management Plan (SMP)* for the site includes a section on soil management.



#### 3.2 SOIL VAPOR/INDOOR AIR

There is currently an operating sub-slab depressurization system at the site. The sub-slab depressurization system is an engineering control identified for the site. Indoor air and soil vapor sampling was completed after the sub-slab depressurization system was installed on-site. CPCs were detected in the indoor air sample, but not in the soil vapor sample suggesting the detection of these compounds is not related to vapor intrusion. Therefore, there is not a completed pathway for the current use scenario. The *SMP* requires the installation of a sub-slab depressurization system in all future buildings. Therefore, there is not a completed pathway in the future use scenario. Under the current use and future use scenarios, construction workers could come into contact with contaminated soil vapor during intrusive activities. Therefore, soil vapor is considered a potentially complete exposure pathway under the current use and future use scenarios for construction workers.

#### 3.3 OUTDOOR AIR

Since the entire site is covered by the building, sidewalks, and/or a six-inch thick layer of concrete, outdoor air is not impacted under current use conditions. The potential exists for the public to be exposed to contaminants from exposed subsurface soil and/or fugitive dust generated during construction activities. The *SMP* provides the requirements for controlling volatilization, erosion, and/or fugitive dust during construction activities.

### 3.4 GROUNDWATER

Under the current use scenario, groundwater is not known to be used as a potable water supply (drinking water is supplied to local residents by a municipal water supply) or for any other known industrial purposes in the vicinity of the site. Therefore, it is not a completed exposure pathway under the current use scenario. It is not anticipated that onsite groundwater would be used for potable purposes in the future. Construction workers could potentially be exposed to groundwater contaminants during current or future intrusive activities.



### 4.0 SUMMARY

Table 2 and Table 3 present a summary of the potential routes of exposure, the potential receptors, the potential completed pathways, and the mitigation which would eliminate and/or control the potential pathways. Under current conditions, potential pathways are complete for construction workers during intrusive activities for subsurface soil, soil vapor and groundwater. There is a *SMP* in place that includes soil management practices. Potentially completed pathways exist for future use for construction workers during intrusive activities for subsurface soil, soil vapor, and groundwater. Potentially completed pathways exist for future use for the public during intrusive activities for outdoor air. There is a *SMP* in place that includes soil management practices.

# **TABLES**

# TABLE 1 CONTAMINANTS OF POTENTIAL CONCERN 10 EAST CHESTER STREET KINGSTON, NEW YORK

D	Matrix			
Parameter	Subsurface Soil	Groundwater	Soil Vapor	
Volatile Organic Compounds				
1,2-Dichloroethane		Χ		
1,2-Dichloroethene (cis)		Χ		
Benzene		Χ		
Ethylbenzene		Χ		
Isopropylbenzene		Χ		
Tetrachloroethene	X	Χ	Χ	
Toluene		Χ		
Trichloroethene		Χ		
Vinyl chloride		Χ		
Xylene		Χ		
sec-butylbenzene		Χ		
n-propylbenzene		Χ		
1,2,4-trimethylbenzene		Χ		
1,2,3-trimethylbenzene		Χ		
1,3,5-trimethylbenzene		Χ		
Carbon tetrachloride			Χ	

# TABLE 2 POTENTIAL PATHWAYS OF EXPOSURE CURRENT USE SCENARIO 10 EAST CHESTER STREET KINGSTON, NEW YORK

Potentially Contaminated Medium	Potential Routes of Exposure	Potential Receptors	Potential Pathway Complete
Surface Soil	None	None	No. There is no surface soil at the site. All soil is covered by the buildings, sidewalks, or a sixinch thick layer of concrete.
Subsurface Soil	Dermal absorption, ingestion.	Construction workers	Yes. Disturbance of subsurface soil may occur during intrusive activities. Site Management Plan includes soil management practices.
Soil Vapor/Indoor Air	Inhalation of VOCs from soil vapor.	Construction workers	Yes. Disturbance of subsurface soil and soil vapor may occur during intrusive activities.
	Inhalation of volatile contaminants from soil that have migrated into structures.	Employees	No. There is an operating sub-slab depressurization system as an engineering control for site.
Outdoor Air	Inhalation of VOCs from soil or fugitive dust.	Public	No. The site is entirely covered. There are no intrusive activities anticipated under current site conditions that would result in potential exposure to contaminants in the subsurface soil or fugitive dust.
Groundwater	Dermal absorption, inhalation.	Construction workers	Yes. Exposure to groundwater (i.e., the subsurface) may occur during intrusive activities.
	Ingestion.	Employees	No. No current potable water use at or near site.

# TABLE 3 POTENTIAL PATHWAYS OF EXPOSURE FUTURE USE SCENARIO 10 EAST CHESTER STREET KINGSTON, NEW YORK

Potentially Contaminated Medium	Potential Routes of Exposure	Potential Receptors	Potential Pathway Complete
Surface Soil	None	None	No. There is no surface soil at the site. All soil is covered by the buildings, sidewalks, or a six-inch thick layer of concrete.
Subsurface Soil	Dermal absorption, ingestion.	Construction workers	Yes. Disturbance of subsurface soil may occur under future site conditions during intrusive activities. Site Management Plan includes soil management practices.
Soil Vapor/Indoor Air	Inhalation of VOCs from soil vapor.	Construction workers	Yes. Disturbance of subsurface soil and soil vapor may occur during intrusive activities.
	Inhalation of VOCs from soil vapor beneath warehouse.	Employees	No. All future buildings must be constructed with a sub- slab depressurization system as an engineering control.
Outdoor Air	Inhalation of VOCs from soil or fugitive dust.	Public	Yes. Intrusive activities under future site conditions could result in potential exposure to contaminants from the subsurface soil or fugitive dust. Site Management Plan addresses erosion and dust control during construction.
Groundwater	Dermal absorption, inhalation.	Construction workers	Yes. Exposure to groundwater (i.e., the subsurface) may occur under future site conditions during intrusive activities.
	Ingestion.	Employees	No. Due to existing public water supply systems in the area, no potable water use at or near the site is anticipated.